SUMMER 2012

SMALL FARM QUARTERLY

Good Living and Good Farming – Connecting People, Land, and Communities

Feature Articles

Supplement to Country Folks

SMALL FARM QUARTERLY - SUMMER 2012

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Cover photo credit: A summer medley: wild grape, seaberry, currents, blueberries, raspberries and cherries from Whole Systems Design Research Farm in Moretown, VT. Photo by Ben Falk

SMALL FARM QUARTERLY

Good Farming and Good Living — Connecting People, Land, and Communities

Small Farm Quarterly is for farmers and farm families — including spouses and children - who value the quality of life that smaller farms provide.

OUR GOALS ARE TO:

- Celebrate the Northeast region's smaller farms;
- Inspire and inform farm families and their supporters;
- Help farmers share expertise and opinions with each other;
- Increase awareness of the benefits that small farms contribute to society and the environment.
- Share important research, extension, and other resources.

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Cornell Small Farms Program Update

Announcing the 2012 Summit Report
The Cornell Small Farms Program is pleased to announce that the Report on the 2012 Small Farms Summit has arrived! The report includes the top ranked recommendations for investment in New York's small farm sector as reported to us by 572 survey respondents and 150 Summit meeting participants. The top ranked priorities include: Develop FOOD DISTRIBUTION STRATEGIES (e.g. collaborative marketing, product pooling and trucking, food hubs) to expand small farm access to local and regional markets; DOCUMENT ECONOMIC IMPACT OF SMALL FARMS on their communities to increase investment in and support of small farms; and Develop new and/or expand existing LIVESTOCK PROCESSING FACILITIES. It is our hope that the report will inform educators, researchers, policy makers and community organizations the major areas in which to invest support for small farms over the next 5 years. To read the full report or to learn more about the statewide Summit meeting, visit www.smallfarms.cornell.edu

New Resources for Small Dairy Farms!
With funding from the Small Farms Program, the Cornell Small Dairy Team, a group of Cooperative Extension Educators and farmers, has released six new resources for small dairy farmers. The project aims to provide resources to dairy farmers in the constantly adapting market. The new tools and resources include:
• Financial Bench Marks for Small Dairies: Helps dairies identify the strengths and weaknesses of their farms compared to other farms of similar size in New York State
• Off-Farm Processing Start-Up Fact Sheet: Suggests first steps for dairy farmers considering adding direct sales of value-added dairy products to their business mix
• Web based Geo-Map: Shows all the small dairy processing plants in New York state
• Small Dairy Case Studies: Highlights unique solutions of how four small dairy operators made decisions to keep their farms profitable
• Production Record-Keeping Book for Grazing Dairies: Formatted and distributed to Cornell Cooperative Extension (CCE) offices statewide by Cornell Small Farms Program Small Dairy Team; printing funded by New York Grazing Lands Conservation Initiative; books are available to grazing dairies at no cost through local CCE office.
• Organic Dairy Forage and Grain Survey: Due to fluctuating precipitation in 2011, many farms were short of forage and grain. This is particularly stressful to organic dairies since they have limited options for buying replacement feed.
To access these new resources visit the Small Farms Program site: http://smallfarms.cornell.edu/resources/small-dairy.

Small Farms Program Website Restored!
Many of you noticed that we were experiencing serious website problems earlier this Spring. We are happy to report that both our major websites, www.smallfarms.cornell.edu and www.nebeginningfarmers.org have been restored. Did you know that the Small Farm Quarterly magazine is also available online? Search for your favorite articles in our "Search by Column" feature or by clicking through past issues! If you'd like to remark on anything in the magazine, feel welcome to leave a comment online!

Small Dairy Field Day Series
This summer, the Cornell Small Farms Program teamed up with educators around NY to host a series of small dairy field days. The field days highlighted creative strategies to improve profitability, sustainability, and quality of life on farms milking 35 to 75 head. If you are in the Groton, NY area on July 11, the final field day of the season showcases "On Farm Energy Production" (Oilseed Press/ Grass Pellet Demonstration). Ed & Eileen Scheffler will be demonstrating the oilseed press they purchased through Organic Valley. Also, John Stoker, an organic dairy farmer from Cazenovia NY, will talk about his business pressing oilseeds for human consumption. For more information about the previous field days, or to learn more about the July 11 field day, visit http://smallfarms.cornell.edu/2012/04/24/announcing-2012-small-dairy-field-days/

Join the Conversation

We would love to hear from you! Send us a question, submit a photo for the "Photo Essay", connect us to your farm and food blog, or mail us an old fashioned letter. Leave a comment online or get in touch via email. You can read Small Farm Quarterly articles and find past issues at www.smallfarms.cornell.edu. We look forward to hearing from you!

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How can I get Small Farm Quarterly?

Country Folks subscribers automatically receive SFQ four times a year at no extra cost. Country Folks is delivered weekly for $47 per year.

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Message from the Managing Editor

Happy Summer!


Violet Stone

I'm always surprised by the speed of lush growth this time of year, especially with the rain and bouts of early warm weather we had in the Northeast. Before I know it, I'll be humming the lyrics to my favorite song from the musical, Oklahoma: "The corn is as high as an elephant's eye, an' it looks like its climbin' clear up to the sky."

As I think back on the articles featured this summer, the theme of 'invention' stands out. As we are well aware, farmers are a resourceful bunch, and it is part of the job description to think creatively when it comes to craftsmanship. In the article "The Right Tool for the Job", apprentice Brad Helm describes the quirky materials his farmer mentor sourced to make new tools: "My favorite chore is digging burdock roots using the 'Kentifer' weeding tool that Roy made for me in his shop from a piece of old truck spring steel." In "New Uses for Old Barns", Martha Herbert Izzi takes us on a tour of farmers that are reinventing the traditional dairy barn into spaces for nursery production, mushrooms, and even a hardware store! And finally, in "Working Oxen on the Farm Today", Jake Czaja describes a modern vegetable farm re-using a traditional practice: Oxen. He writes "The truth is that oxen are an amazing asset to a farm and are as useful today as they were yesterday."

Each issue, I'm filled with gratitude for the farmers and educators that take time to share their stories and advice with our reading audience. Thank you to our contributors and thank you to our readers! By the time this issue arrives in your mailbox, I hope your corn, or whatever else is growing in your garden or field, is climbing clear up to the sky!

Best wishes,
Violet Stone

Join the Cornell Small Farms Program on Facebook!

You can now receive small farm news, events and much more on Facebook! This venue will help us to continue providing great resources to the Northeast community without cluttering your email inbox! Visit Cornell Small Farms Program on Facebook and click the "Like" button to see our resources pop up in your newsfeed.

Book Nook

Meat

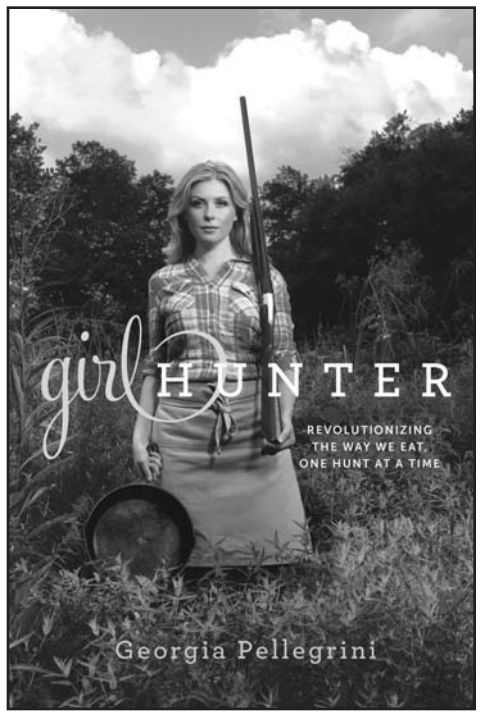
by Jill Swenson

Sheepfolds, pigpens, chicken coops, and smoke houses: on a farm with animals, these places have meaning. Cynthia G. Falk writes about the agricultural and architectural diversity of historic farm buildings in her new book: *Barns of New York: Rural Architecture of the Empire State* (Cornell University Press, 2012). This is a beautiful book about the rich diversity of livestock practices with more than 200 photographs and line drawings. I haven't seen anything quite like it since Eric Sloan's *An Age of Barns*, now a collector's item.

Sustainable practices of small scale farming and hunting include a place for meat at the table and there are some wonderful new books about this subject. Passion for good, simple, healthy food is something farmers and hunters share with chefs, urban homesteaders and metropolitan diners in these new books about meat and so much more.

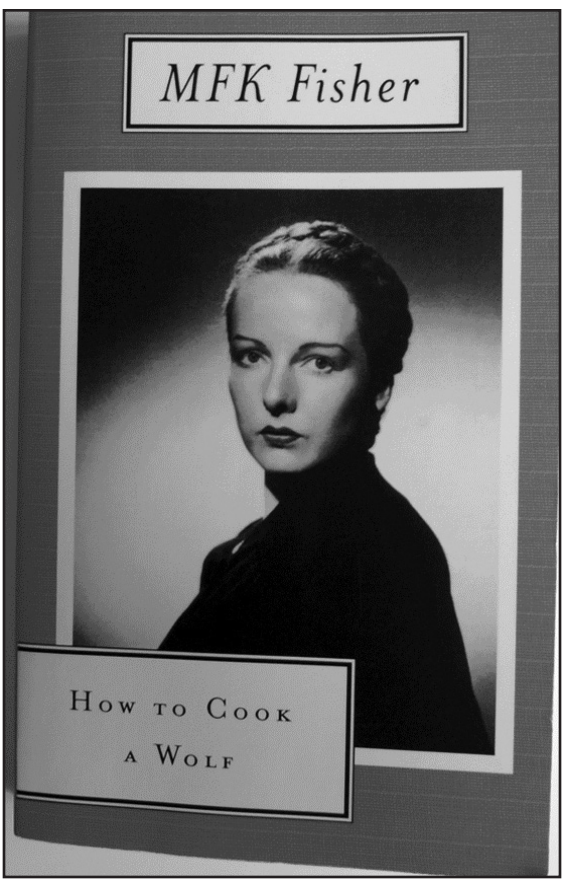
Farmer and evangelist for the grass-fed movement, Joel Salatin's new book, *Folks This Ain't Normal: A Farmer's Advice for Happier Hens, Healthier People, and a Better World* (Hatchette 2011) points out how alienated most people are from the meat they eat. If you've never read one of Salatin's books, you're missing a distinctive voice with a provocative point of view. He's got a wicked sense of humor and a storyteller's knack. This is his first title with a big commercial publisher and it quickly became a best seller.

Tamar Adler, *An Everlasting Meal: Cooking with Economy and Grace* (Scribner, 2011), writes essays for the home cook. Inspired by the spirit of M.F.K. Fisher's *How to Cook a Wolf* - written in 1942 during wartime shortages - this is a young woman's account of how to make the most of everything you have including the bones and peels and ends, demonstrating what great chefs don't want you to know. Part philosophy, part cooking lessons, Tamar Adler writes about boiling water, cooking eggs, using meat and fish resourcefully, and pulling together full meals from empty cupboards.



In *Girl Hunter,* Pellegrini gains respect for hunters who eat what they kill, respect the land, and preserve the wilderness.

Roasts for every day of the week is the subject of the new book by the authority on soulful French cooking and author of the popular, Pork and Sons. Stephane Reynaud has a guide to roasting fish and meat titled, Rotis (Melville House, 2011). Reynaud grew up the grandson of a rural village butcher and today owns one of the best restaurants in Paris. Reynaud has appeared on The Martha Stewart Show and NPR's The Splendid Table. Booksellers from Brooklyn to Maine tell me this is the one cookbook about meat people buy once they see it.



Tamar Adler's new book, An Everlasting Meal, is inspired by the spirit of this much older book, written in 1942 during wartime shortages.

Blood, Bones and Butter by Gabrielle Hamilton (Random House, 2011) is a bestselling memoir subtitled, "The Inadvertent Education of a Reluctant Chef." An engaging account of her father's spring lamb roast appeared as an excerpt in The New Yorker. The problem with this kind of memoir is that it's more about her dysfunctional relationship with her family than it is about discovering down-to-earth food and how she puts meat on the plate at her much acclaimed restaurant, Prune, in New York City. Hamilton follows the foodie memoir formula: share a few recipes, intersperse with personal reflection, and structure around tight family narrative. It follows in the style of Ruth Reichl, *Tender at the Bone: Growing Up at the Table* (Random House, 1998), who served as Editor in Chief of *Gourmet Magazine* for 10 years until it closed in 2009. Reichl set the bar for food memoir and Gabrielle Hamilton raised it.

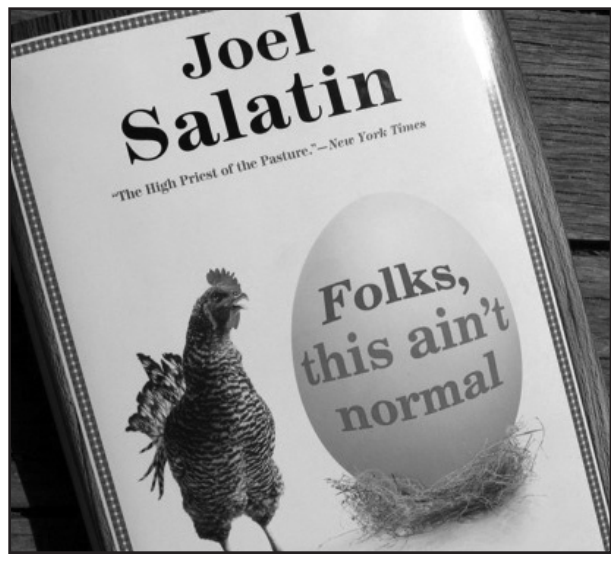
Girl Hunter: Revolutionizing the Way We Eat, One Hunt at a Time by Georgia Pellegrini (December 2011, Da Capo) is another memoir from a chef, but one who acquired the passion for good food along a creek bed fishing for breakfast trout. Pellegrini describes the task of catching and killing her first turkeys and how she plucked, prepared, and served them. Her attempt to hunt venison is a near lethal disaster. She writes with self-deprecating humor about the old guys who take her out duck hunting and righteously make a fool of her. She gains respect for hunters who eat what they kill, respect the land, and preserve the wilderness. Tracking her career from underaged waitress and bar maid to the Catskills campground where the mess hall became her refuge from the city scene of catering life provides an entertaining read.

Hank Shaw's *Hunt, Gather, Cook: Finding the Forgotten Feast* (Rodale, 2011) is another new book of interest filled with personal stories and recipes. With this contemporary eat wild narrative, Hank Shaw offers a beginner's guide to fishing, hunting, foraging, outdoors, and cooking wild meat. This is not, however, a book for hunters, but a book about eating wild.

Meat Eater: A Natural History of an American Hunter, by Steven Rinella (Spiegel &Grau, 2012) explores the disappearance of the hunter and the loss of Americans' connection with the way their food finds its way to the table. Hunting, Rinella writes, is connected intimately with our own humanity. Thrilling stories woven together with expository information about the natural world and the history of hunting, this memoir offers a fresh examination of our relationship with nature and food. Each chapter concludes with "tasting notes," for home cooks and those around a campfire.

No matter what your preference - pork, beef, chicken, lamb, goat, turkey, rabbit, venison, fish - there's a new book here on this list of recent releases to enhance your appreciation of meat and how it gets to our plates.

Jill Swenson is a former farmer and the president of Swenson Book Development, LLC, based in Brooktondale, NY. She may be reached at jill@swenbooks.com or 607-539-3278.



If you've never read one of Salatin's books, you're missing a distinctive voice with a provocative point of view.

COMMUNITY AND WORLD

Growing Communities

by Mason Donovan

In the beginning of our humble American nation, we had strong communities tied around local family farms. As we grew in population, the farms decreased along with the community connection. There is a resurgence lately to not only source locally, but to once again re-establish our communal connections to farms and each other.

A little over a hundred years ago, agriculture was the center of community, serving up sustenance and conversation at the dinner table as well as social interaction at the market and farm stand. It was also the major source of income. In the late 1800's over 70% of the U.S. population was employed in agriculture. Today, it is less than 3%. The loss of local small farms has had a dramatic impact on the quality of diets and society. One movement to reverse this trend is the Locavore movement. It has gained momentum in the last few years helping us understand the importance of locally sourced food. What has been over looked in this movement, is the correlation of the loss of local farms to the decline of a closely woven community.

As social media connects us to our primary school classmates, old flings and even our next door neighbors, many are waking up to the fact that there is something really missing in our lives that cannot be fulfilled by status updates and virtually posting our realty. How do small farms fulfill this void? I brought this question to a couple of enterprising farmers, Ryan Ferdinand and Mike Hvizda. Ryan and Mike began the creation of Phoenix Hill Farm in Boscawen, NH in 2010. At the time of their purchase it was a 5 acre parcel on a wooded hillside with a house which showed its over two centuries of use.

Phoenix Hill Farm was destined to become more than a farm. They wanted it to reach back in history to a time when social interaction between farmers and residents translated beyond a commercial transaction. It was a long and deliberate path to this goal. Ryan's desire to connect with others and the earth led her through living on an organic farm in England to a potential chef career and a brief period as a founding art teacher at a charter school. Mike's interest in agriculture was inspired by his tri-athlete father who was very conscious of his food intake. It was further cemented living in mid-west towns where healthy living, from food to exercise, was an encouraged way of life. Both Mike and Ryan eventually found themselves living on a permaculture farm in Tyngsboro, MA. It was on this property where they started to formulate the idea of Phoenix Hill Farm.

Like a well seeded row, ideas grew quickly and started to bear fruit. Agricultural challenges such as clearing land led to even better solutions; free range pigs. Mike and Ryan led countless educational walks for visitors around the grounds to explain the benefits of sustainable permaculture. Each visitor helped to not only formulate the realization of the farm, but started to create a community of friends, customers and farm participants. It was this later fringe benefit, they both found to be the most fulfilling.

A quick look at their Facebook page may have you think they already had a community before the farm. Although they were very active in social media with hundreds of likes and friends, Ryan said it can "give you an illusion of being connected because of the hyper-communication." Mike saw the online connections as a valuable resource, but he believed "community was made in person." What better way to start making the community, than to start from the ground up? The days of farmers networking to support each other is not gone, but can sometimes feel like a bygone era. Mike and Ryan started a network of like farmers to help each other. The work share and suppers became aptly named the "Wuppers Club."

There are those who believe Robert Putnam's book, "Bowling Alone", about the collapse of the American community has to be outdated because of our virtual connections. He details organization after organization whose membership has been on a rapid steady decline (Elks, BoyScouts, churches of every kind, PTA, Odd Fellow, etc. etc.). But our virtual communities are expanding exponentially for every generation. Over 80 million people have signed up to play the virtual farming game, Farmville. Think about that. The amount of people interested in spending their free time virtually farming is approximately equal to the same amount in the late 1800s who were actively involved in American agriculture. Although less than 1 million people in the US claim farming as an occupation today, the need to connect to agriculture has not diminished. In NH alone, winter farmers markets doubled from 2011 to 2012. New markets such as the Tilton farmers market are attracting over 1,000 visitors every Saturday.

Like the fringe community benefit of Phoenix Hill Farm, these farmers markets are reconnecting us to our food source and our neighbors. It is a place to commune, be educated and share a connection. Unique community building ideas are exploding. As of the writing of this article, 7 local artists in the NH lakes region have teamed up with 16 farms to create original works of art to support local agriculture.

A day of farm work ends with a homemade pizza party. Photo by Ryan Ferdinand

As Ryan and Mike look towards the future, they envision a pick-your-own CSA where the consumer can be part of the process. They also are working on plans to build an institute which provides apprenticeships and community rooted in agriculture and art. Mike adamantly believes, "one has to consciously make their community," and not wait for the community to form around them.

Studies have shown millions of Americans are becoming addicted to their texting and online posting communication. Their brain waves illustrate a starvation for interaction. Look around at the next farmers market and see how many people are not texting or deeply absorbed in their mobile devices. You may be pleasantly surprised to find what we are really starving for is good food and good company provided to us by our small farms.

Mason Donovan owns a hay farm in Boscawen, NH and founded The Yard Project. The Yard Project is an agriculturally based organization to promote healthy connected agrarian communities. Visit www.TheYardProject.com for more info. He can be reached by email at Mason@TheYardProject.com.

Growing your own agricultural based community may seem as overwhelming as starting a farm. It is all about seeding, growing and harvesting.

Seeding: Intended crops must be sown thoughtfully and with a plan.

- Gather some like-minded friends over local food and discuss what you would like out of a community.
- Write down the key points of this conversation and send it out to the group within the next few days. Ask them to share with their friends.
- Search for existing organizations which may already be providing this service. Start first with your local Ag Extension: www.csrees.usda.gov/Extension

Growing: Be your own farmer of community and support the growth.

- If your community does not have small farms, seek out ways to create them. Beginning with community gardens is a great start. Petition your town to provide an acre of town land for a garden.
- Create an online membership to aid in cross communication. Facebook is a great place to start for free.
- Actively seek out small farmer opportunities by reaching out to your local small farm educators such as the Cornell Small Farm program: smallfarms.cornell.edu

Harvesting: Reap the benefits of community by getting involved.

- Community is all about being involved. Attend local Ag education workshops. Join your town or county Ag board.
- Support your local farmers by shopping locally and helping out on the farm.

Like a pumpkin patch, involved active agricultural based communities do not sprout up out of nowhere. If not seeded and cared for, all you will get is a field of weeds.

Farm Tech

CoolBot Enables Small Farmers to Build Do-it-Yourself Coolers

by Aaron Munzer

Like many small-scale vegetable growers, Anton Burkett couldn't afford a large, expensive walk-in cooler compressor to cool his produce before market.

Then he found the CoolBot.

When he started Early Morning Farm near Ithaca, NY. in 1999, he built a small, eight foot by ten foot walk-in cooler powered by a small refrigerator compressor.

With the continued success of his vegetable CSA, two years ago he found it necessary to build a bigger cooler, but couldn't afford the thousands of dollars it would have cost for a larger compressor. He had a dilemma - without the cooler he couldn't grow and harvest more vegetables, but without larger harvests he couldn't afford a bigger cooler.

After doing some research, he decided to try the CoolBot, a thermostatic controller that turns an off-the-shelf air conditioner into a compressor for a homemade walk-in cooler, which would save him thousands of dollars and still keep his produce fresh and cool.

Weeks later, Burkett built a larger eighteen by nineteen foot cooler around his original cooler, powered by the CoolBot, and started hauling in vegetables within hours.

"Not only did it work, it worked great!" he said. "We now cool the big cooler with less electricity than we used to use on just the small cooler, plus it seems to get the veggies down to temp faster."

Since the device went on sale in 2006, thousands of small farmers - and florists, hunters, brewers and anyone else needing a walk-in cooler - have started using the CoolBot to keep their product fresh for a fraction of the installation and construction costs of the more traditional options.

The CoolBot uses patent pending technology that allows a home window air conditioner to keep a well-insulated room as cold as 35 degrees consistently, while at the same time using about half the electricity of a comparably sized standard compressor. The setup is simple: aluminum foil attaches a heating element to the air conditioner's temperature sensor to trick the compressor into running longer. The CoolBot has a second sensor that idles the air conditioner when its fins are about to freeze, and restarts it when they have thawed sufficiently.

Inventor and small-scale vegetable farmer Ron Khosla created the CoolBot simply because he and his wife Kate couldn't afford an expensive walk-in cooler compressor for the CSA they operated, Huguenot Street Farm. After lots of research and talking with friends, he thought that he might be able to use an air conditioner to accomplish much the same cooling effect with only an AC unit. Although he had to destroy more than a few air conditioners while trying to create the controller, he was able to keep his vegetables cold, using a simple device made from a light bulb and a thermometer, but had to monitor the unit to keep it from freezing up. The final product doesn't overwork the window air conditioners. Because of the small room, tight nature of walk-in coolers, the compressors run less hard than when they are installed in someone's living room.

CoolBot inventor and organic farmer Ron Khosla with his partner Kate in front of their CoolBot regulated cooler.

"We made it out of a desperate need for our small farm, but I never thought it would get this popular," he said.

Once he had figured out how to keep his produce consistently cold by manually cycling the compressor, he enlisted the help of an engineering friend from his college days at Cornell University, Timothy Weber, to build a micro controller "brain" for the CoolBot that would cool an insulated room down to well below its normal range automatically. Khosla said he's been astonished by how successful the device has been.

The National Aeronautics and Space Administration (NASA) also provided technical assistance in the design of the frost sensor through their Space Alliance Technology Outreach Program.

"This was one thing a small farmer couldn't do well on his/her own, you were stuck paying thousands of dollars for a normal compressor, and now we've provided do-it-yourself folks a way to build their own coolers," Khosla said.

What Khosla said he's been most excited by is the CoolBot's popularity in the developing world, where farmers from Uzbekistan to India have been building small coolers to keep their produce fresh. It's helping to solve one of the largest agricultural problems in those places, where up to 40 percent of fresh produce spoils before it gets to market.

"Small, poor farmers across the world are so happy to find something they can afford, that uses so much less electricity. That part has been much more fun than the thousands we've sold in the U.S," he said.

Khosla said that in places where there's no nearby Home Depot, coolers have been made from papyrus, brick, and even straw bales.

"A lot of our customers hack together stuff and it usually works," he said, laughing.

After building his own cooler and installing a CoolBot, Burkett has some advice for those thinking about their own do-it-yourself cooler.

"Buy your air conditioner early - we found out that there is an air conditioner season at the retailers," he said. "You would think that the season would be at its peak in say August, but that's actually when the retailers are boxing air conditioners up and sending them back to the warehouses. We put the finishing touches on our cooler just about at that time and we were really lucky to find an air conditioner still in stock."

For more information on the CoolBot, visit storeitcold.com.

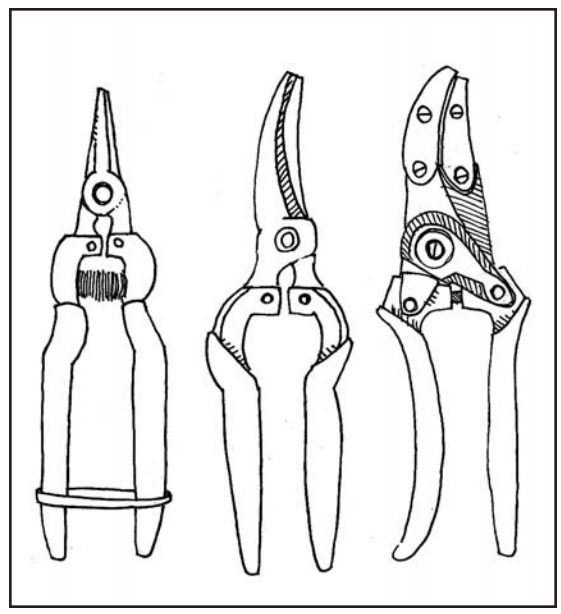
Aaron Munzer is a freelance writer and farmer at Plowbreak Farm in Hector, NY. He may be reached at aaronmunzer@gmail.com.

The CoolBot is a thermostatic controller that turns an off-the-shelf air conditioner into a compressor.

FARM TECH

The Right Tool for the Job

by Brad Halm



We farmers have a very interesting relationship with our tools.

Tools are now and have always been vital to farming: They're how we interact with the land to get things done. Whether it's a stirrup hoe or a cultivating tractor, our favorite tools become extensions of our bodies, as we use them again and again.

We farmers have a very interesting relationship with our tools. Nowhere have I seen more random and unlikely materials become useful tools than on a farm. As a group, farmers seem to be driven by the ethics of rugged individualism, frugality, and independence, and there's no way we're going to pay $59.99 for something we can make for free from scavenged materials around the farm (even if it takes us two weeks).

Small farmers are also caught in a void. "Gardening" tools sold at nurseries are largely overpriced, poorly designed, and way too dainty to get anything done on a farm. Conversely, most farm equipment is sized for huge producers with thousands of acres of commodity crops and is obviously unsuited for us smaller-scale folks. Thus, we're forced to repurpose odd items found hidden in the recesses in the back of the barn, to buy antiquated equipment at auction, and to improvise our own tools.

For me, there was no better introduction to this phenomenon than apprenticing for a few seasons with Roy Brubaker on his organic vegetable farm in central Pennsylvania. Roy had a fierce imagination and a steady hand with an arc welder, and he hated to buy anything. This combination led to a steady stream of inventions pouring from his shop, some absurd and some amazing. I remember harvesting greens with a tool made from a food-processor blade and an electric drill, "harvesting" pesky sparrows and invasive starlings in a human-size trap, and watering transplants using harvested rainwater from a reclaimed milk tank on a semi. We even had an old Dodge Colt that was converted for use as sort of a field-delivery wagon. We'd drive it down the farm lane, filled with sacks of fertilizer for the transplanting crew, and return to the packing shed overloaded with boxes of melons or bunches of beets from the harvest crew. Once, in a pinch, I picked up my mother from the hospital after a serious bacterial infection in our "Crop Car." It was actually a pleasant ride. Mom napped in the front while a fresh breeze whipped through the missing window seals and wafted the scent of organic fertilizer through the car.

Roy loved working in his shop and would do so as often as the constraints of farming would allow him. I remember him struggling through a chilly spring day of harvest with a serious cold, hacking and coughing all the while. Later that night, I found him in the shop, the temperature even colder, welding away. "I'm starving my cold," he said. I think he figured if the conditions were tough on him, they had to be even worse for whatever virus had infected his lungs. Sure enough, the following day yielded a chipper and smiling Roy, complete with a new creation from his shop in hand.

He never passed up the chance to create his own solution for whatever problem arose on the farm, even if he could buy one relatively inexpensively. We had homemade opening devices for our greenhouse ventilation windows, a homemade spool to distribute our plastic packing bags, and a homemade barrel washer to clean our root crops.

Were all these homemade tools worth the effort it took to make them? Did they really improve our efficiency? Did Roy get a proper return on all the time he spent in the shop? The answers are immaterial. I learned a lot from working with someone who was unafraid to exercise creativity to solve a problem rather than reach for an off-the-shelf solution.

During my second winter in Pennsylvania, I was midway through building a set of harvest crates from a poplar harvested from the farm when I realized that, for me, the most valuable part of farming lies in the process, not in the number of pounds of produce harvested at the end of the season.

That said, tools for small farmers are starting to become more available. New companies are springing up and old ones are expanding their product lines to supply high-quality equipment to farmers of all scales. It's a welcome change, as there's nothing more frustrating than struggling through a task with a poorly designed tool. Ultimately, I think tools are at their best when they're well planned, properly made, and efficient to use but still carry some of our collective farmers' soul. My favorite chore is digging burdock roots using the "Kentifer" weeding tool that Roy made for me in his shop from a piece of old truck spring steel (the original model was built as a wedding gift for two of his earliest apprentices, Kent and Jennifer). It's a joy to use, and brings back a lot of good memories every time I pull it out of the tool shed.

Excerpted from Greenhorns: 50 Dispatches from the New Farmers' Movement (c) Zoe Ida Bradbury, Paula Manalo, and Severine von Tscharner Fleming. Used with permission of Storey Publishing.

SMALL FARM SPOTLIGHT

New Uses for Old Barns: Reframing the Venerable Red Vermont Landmark

by Martha Herbert Izzi

Vermont's red barn, once the hallmark of the small family dairy farm, is now the centerpiece of a changing agricultural landscape. It is being reframed and reformed for new, often unusual enterprises. While dairy production still tops the agricultural economic scale in Vermont, the actual number of dairy farms is declining due to new technologies, improved genetics and larger dairies. But as new, young and older farmers move in or veteran dairy producers retool for new endeavors, the barn is taking on new life.

Tweed Valley Farm - Pittsfield, Vermont

Tweed Valley Farm began its latest incarnation in 2002 when a newly married couple named Nancy Cooper Wisner and Fred Simon fled from their New Jersey home. They could "see the smoke from the fall of the Twin Towers" on that fateful day.

Not long after, Nancy and Fred found themselves signing a contract for a far-from-perfect property. The "big pink barn" had been the unlikely home of a successful furniture store. The house was “a nightmare”. But, Nancy says, “the farm had neighbors, a town, wood, and a river across the street for water” and they were motivated to become more self-reliant.

Prior to moving to Vermont Nancy had spent years in sales and marketing in the garden industry and she clearly has an entrepreneurial spirit. With time and research she began to get an image of what they would produce. She wanted to do something that was different and that could provide a consistent income. "Everyone was doing eggs, beef, milk and veggies." She settled on mushrooms.

Today, 120 shitake mushroom logs are thriving along with oyster bags in the 8x8 hoop-style greenhouses in the middle section of the 8,000 square foot barn that began life in the 1850s as a dairy farm on the Tweed River. Another section houses the quail hatching incubator, five brooder pens and 5 grow out pens for the hundreds of quail that are sold for meat and eggs. Still another section is the goat shelter for the Nigerian dwarfs that are raised for milk and breeding stock.

After several years of selling Vermont Specialty Mushrooms, and quail year-round at the Farmer's Market in Rutland, Nancy has embarked on a new venture; marinated shitake mushrooms. She has test-marketed them at the Farmer's Market and other venues to great reviews.

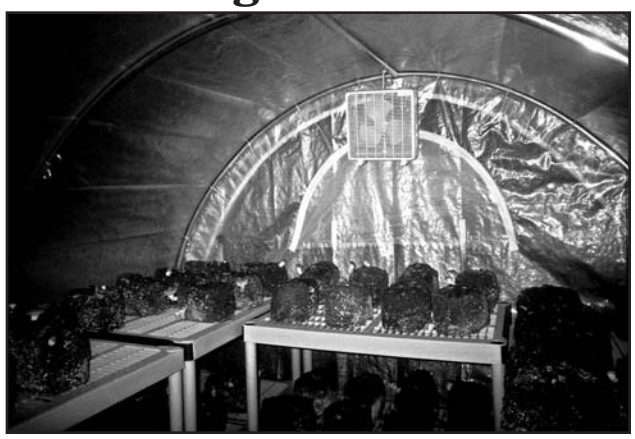
Nancy has vivid, often humorous memories of their early years recalling two seniors renovating the barn, lowering the floor to pasture level, lugging an old chicken barn in pieces up the street and attaching it to the barn. She speaks of the barn that became the setting for a life where they "have learned so much" and it has erased Nancy's fear of having

Marinated mushrooms are Tweed Valley’s newest product. Photo by Fred Simon

nothing to do.

Applecheek Farm - Hyde Park Vermont

John and Judy Clark started their farm in 1965 with ten cows. Over the years, they grew the dairy herd to a peak of 120 holsteins, added pigs, emus, beef, poultry, geese and incorporated agritourism events. Education was a big part of their philosophy. Bringing families and school children to the farm, letting them see the operation and perhaps buy



Shitake mushrooms growing inside a greenhouse, which are set up inside Tweed Valley’s barn. Photo by Fred Simon

some beef, chicken, or eggs were important values.

The Clarks had two sons who were invested in the farm but had their own ideas and interests. Oldest son, John converted the conventional stanchion barn to a streamlined parlor with a store so that visitors could see the entire milking, calving and processing operation and hopefully buy some of the end products.

Son Jason is a chef and his vision was to open a catering business on the farm. The Clarks had already built a bunker silo which had evolved over time into a 'community hall' for various meetings and local gatherings. As Jason's reputation spread as a chef providing delicious local farm food (when it didn't have the cache it does today) the Clarks added a kitchen with freezers downstairs from the main hall so that Jason could sell frozen meals to the growing number of visitors.

Jason now offers a monthly localvore dinner which has become very popular. Judy says, “We also rent the hall for retreats, workshops, family reunions and weddings”. But their interest in the educational aspect of the farm operation continues to grow and they are exploring a number of possibilities with other organizations as a means of sustaining the farm. "We want to renovate the bottom of the barn to include classrooms and rooms for overnight stays.

Judy says, "We have converted the end of the dairy barn, now called Applecheek Localvore Farm Market." It is now the outlet for their extensive farm products from pork, poultry, beef and veal to vegetables, raw milk and products from other local farms.

The Clarks are currently milking about 40 cows as the industry continues to constrict and prices fluctuate radically. It is likely that the barns will be reinvented yet again as they grow the meat business, expand their CSA and continue to frame the educational programs. They are moving with the times, retrofitting the barns and looking to the future.

New Lives for Old Barns in the Morrisville region

George Cook, a veteran UVM Extension Farm Safety Specialist, has seen many old dairy barns morph into unimagined uses lately. "The [Lehouillier] family dairy barn became a farm stand with fruits and veggies when the father died. Later, the family changed it again and it's now Johnson Hardware. That facility is making way more money than

A portion of the dairy barn is now used for the ApplecheekFarm Store. Photo by Applecheek Farm

before and Mrs. Lehouillier is still behind the cash register." George describes an old barn put to use as a seeding area for a nursery, and a couple others turned into apartment buildings. Others are being upgraded by the younger generation for a future in dairy farming. He describes the [name] family farm in [location]: "They have modern milking facilities, a totally new milking parlor and up to 200 cows".

Vermont Division for Historic Preservation

After twenty years of providing grants to repair and retain historic barns, the Vermont Division awarded "nearly a quarter million dollars" to sixteen recipients this year according to its administrator, Judith Ehrlich. These grants must be matched and the barns must be at least 50 years old to qualify. The top dollar award is $15,000. The awards are not necessarily contingent on a continued agricultural use, "but most are" according to Ehrlich. The categories of requests usually fall into three areas: young couples coming to Vermont to farm, families inheriting the farm, and new buyers who are resurrecting abandoned barns. In one case, the new buyer bought a farm that was out of use for twenty years. It had belonged to one family for over a century. The new buyer wanted to restore the farm to its agricultural 'roots.'

Despite the many times that we have heard over the years to expect an agricultural doomsday, the future looks reasonably healthy for Vermont farms, especially in light of the localvore movement, concerns over food security, food safety and most importantly the need to change our food habits for better health.

To learn more about Tweed Valley Farm, visit www.tweedvalleyfarm.biz. To learn more about Applecheek Farm, visit www.applecheekfarm.com. To learn more about historic preservation in Vermont, visit accd.vermont.gov/strong_communities/preservation

Martha Herbert Izzi is a writer and farmer at Bel Lana Farm in Shrewsbury, Vermont. She may be reached at mhizzi@yahoo.com.

Once a bunker silo, this space now hosts a monthly localvore dinner. Photo by Applecheek Farm

NEW FARMERS

Working Oxen on the Farm Today

by Jake Czaja

I never thought I would be learning to farm with oxen. I grew up in Chicago and I did not get to see the country all that often. The only "Bulls" I knew of were a professional basketball team. After high school, I chose to go to college out in Iowa. It is interesting how a new place can influence your ideas. Well that summer, I decided to work on a farm. I was curious, excited, and I felt free to explore my interests. But I had not gone so far as to think that I would want to become a farmer. That only came after I had worked on a few more farms. I make these statements today. But not too long ago, most people lived in the country, farmed the land, and had draft animals. If they heard me say this, they would probably look at me funny.

Today, using oxen primarily for farming is uncommon in the United States. The only other oxen I have encountered reside on historical interpretation farms like the Howell Living History Farm or Sturbridge Village. The truth is that oxen are an amazing asset to a farm and are as useful today as they were yesterday. Historians of early America say that if it were not for the cow and the ox, then none of us would be here today.

There is a farmer in Northern Pennsylvania, Millerton to be exact, who trains and utilizes oxen to make a living farming. He grows over 30 types of vegetables on about 1 acre, about another acre of various grains, and raises pastured chickens, pigs, and grass-fed cattle. He does not have a tractor to work the land. Instead, he has a Holstein team of oxen to plow, spread manure, haul stones, cart, cultivate, harrow, disc, skid logs, and pull you-name-it. He also has me. I am farmer Andy's apprentice for this year.

In order to be of any help to Andy, I have to learn to teach or "train" the oxen. According to Andy, oxen are never finished with their schooling. They respond to voice commands and negative reinforcements of the whip that are both built on their prey animal instincts. So if we give the oxen a command, such as, "Come here!" the oxen move forward, because they associate the sound and a crack of the whip on their rumps if they do not move fast enough. For all we know, oxen are not rational thinking animals like us. We have to be always thinking about where we want to pull the stoneboat, giving the oxen the right commands, making sure the oxen respond with the right movements, and see if we have navigated the corner without any rocks falling off. Driving oxen is quite a skill!

My first few practices driving Burt and Marvin were not what I had expected. I thought, "Ok, ok, I just tell them 'Come here!' then I tell them 'Whoa!' and we stop right where Andy wants the stoneboat. How hard can that be?" Well anybody who has played a game of golf can probably sympathize that trying to put an object in a certain spot while using another tool can be challenging. In the case of the oxen, I am developing a "sixth sense" of where exactly that hitched stoneboat is in relation to where the oxen are.

From Left to Right: Burt, Marvin, (the oxen) Andy, and Jake.

A discussion of oxen would not be complete without mentioning the benefits. Why would anybody want to use oxen over a tractor or horses for that matter? I am attracted to oxen because they are economical when compared to tractors or horses. You can pick up a pair of calves from the local dairy for $20 a piece (that is honestly what one farmer was going to sell his calves to me for), train them individually in your spare time, cut out a yoke and bows out of a log, chain your team to a wagon, and are good to go! Maybe I left out a few details about how much time is involved in training a mature team or how feeding milk to your calves at an early age can make all the difference later on. The knowledge and skill required to use oxen will make you become a better farmer.

Andy tells me stories from time to time about his father. His father grew up around oxen and horses on the farm. At age 4, Andy's father was making his own yoke for his team of oxen. By age 6, Andy's father skidded all the firewood for the winter with his two year old team of oxen. At age 7, he was plowing up the wheat fields with the horses all by himself. The only thing that would slow this kid down was a lack of a safety feature on the hay tedder. One day, the kid's foot slipped off the pedal that operated the hay tedder and went right into a gear. He left the horses hitched to the tedder and ran home crying with a cut foot.

I find that Andy's stories tell a lot about farming and youth. Traditionally, the kids did a lot of the farm work. Sometimes they did all the farm work, especially when the father was drafted for the military or was working another job. I also think about Andy's father and how young he was working with these animals that weighed 30 times his body weight. I tell Andy that his father was exceptional, some kind of prodigy farmer. Andy replies, "No, my dad always said with regret that he could not plow by himself till he was 7." Apparently, there were some kids in the neighborhood that could plow by themselves when they were 6!

Now, I will be turning 23 this year and I am looking at making my first yoke. I may be several years behind Andy's father, but I plan to keep up the tradition of working animals. Who knows, I might even get to a point when I can plow all by myself.

Jake is an apprentice at Spring Meadows Farm in Millerton, PA. He may be reached at Springmeadowsfarm@gmail.com.

Spreading compost on the garden where the roots - beets carrots, parsnips - will be planted.

Photo by Jake Czaja

2012 Field Days at Spring Meadows Farm

Spring Meadows Farm holds monthly Field Days on Saturdays from 10 a.m. to 2 p.m. Field Days end with a pot luck and are open to the public. A PASA special event: "Happy Animals Work For a Living" will take place on Oct. 11 at Spring Meadows Farm.

- Fermenting Zucchini and Other Vegetables, July 21
- Potato Harvesting with Oxen, Aug. 11
- From Wheat to Breadmaking, Sept. 8
- Garlic Planting, October 6th
- Happy Animals Work for a Living, Oct. 11 (10-4)
- Fall Plowing with Oxen, Nov. 3.
- Season Recap, Nov. 17

For more info, visit http://springmeadowsfarm.wordpress.com or call 570-537-2128.

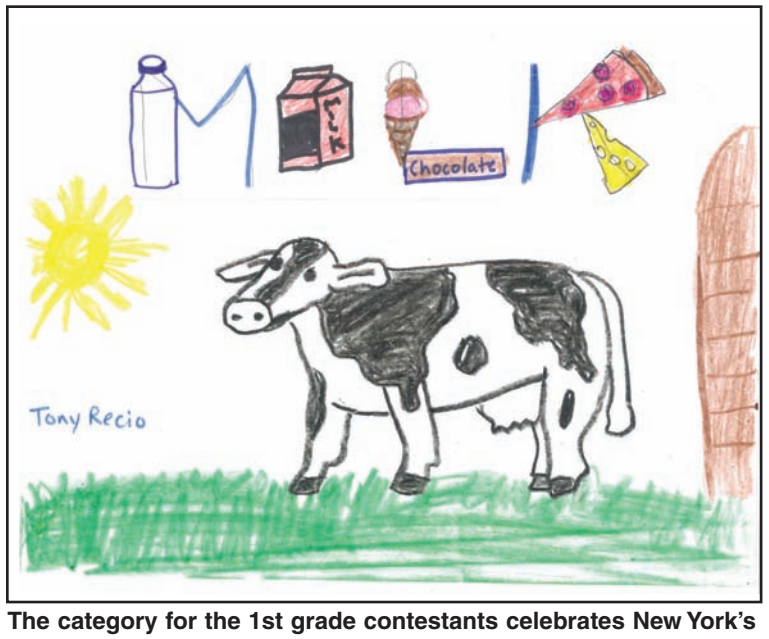
I Love New York Agriculture Art & Writing Contest

Each year, NYAITC and New York Farm Bureau sponsor an opportunity for Pre-K through middle school students across the state to discover more about where food comes from and why agriculture is important. The contest is divided by grade level, and each level has a specific topic to create a piece of art, poem, or narrative related to an aspect of agriculture. There were over 1,000 entries in the 2012 contest. All awardees receive a Certificate of Recognition, and the first place winners are awarded $25 to invest in their education or an agricultural product or experience.

Congratulations to the all the award winners! We wish we could feature all of them!

Left - Maisyn Stanton, a Pre-K student at Downsville Central School painted a picture of her favorite New York farm animal - a pig in front of a red barn! Maisyn was the 1st place winner in her age division.

Sara Burrowes of Tioga Central was the 1st place winner in the Kindergarten category, where the students were asked to color a drawing of themselves with their favorite food. As you can see in Sara's drawing, she pictured herself enjoying carrots with corn growing in the background.



The category for the 1st grade contestants celebrates New York's dairy industry. The students were asked to paint or color a drawing showing where milk comes from and products made from milk. Tony Recio of Holy Name created this winning piece of art.

Small Farm Quarterly

Youth Page

New York Agriculture Poem

Students in 4th grade are asked to compose a poem. The poem can be general or specific, and it can focus on one of the over 200 agricultural commodities produced in New York, a specific farm or farmer, or an aspect of the food system. Jesse Fisher of Cattaraugus-Little Valley Intermediate won the division with her poem entitled "Farmers". A section of her poem reads:

"Farmers collect sap,
Out of a maple tap.
A farmer ends their day
By giving thanks to pray."

Leah Pasqualetti of South Davis Elementary wrote the second place poem entitled "Three Cheers for Agriculture". A section of her poem reads:

"We're thankful for farmers who plant fruits and vegetables to eat,
And others who raise livestock for poultry, pork, and beef meat.
Agriculture is much more than just food,
It's also about fibers for clothing to fit every mood.
In the Summer, Fall, Winter, and Spring,
Three cheers for the farmers who do their thing!"

New York Agriculture in the Classroom's (NYAITC) mission is to foster an awareness, understanding, and appreciation of how New York State and the United States produce food and fiber. NYAITC assists educators in teaching about our agricultural food systems, what we eat, and how we live by offering opportunities for students and communities to engage with agriculture.

If you are interested in learning more about NYAITC, or volunteering for a variety of events, please visit www.nyaged.org/aitc.

Right - In 2012 the 2nd grade competition proved to be the most competitive as it had the most entries of any other age group. Joshua Miller of Fonda-Fultonville came out in 1st place with his creative picture of an apple tree and pig. Along with the picture, Joshua was asked to write four sentences about his favorite New York food and where it comes from. He said, "My favorite New York food that is good for me is the apple. But I also love bacon which comes from a pig. Bacon is delicious with eggs! I love New York food!"

Left - Third grade students are asked to paint or color a drawing with a one sentence slogan about New York agriculture. The slogan can be general or specific to a particular agricultural process of commodity. Strawberries were the product of choice for Teara Tattro, a 3rd grader at Deleaven Elementary School. Her slogan states, "New York Strawberries are Berry Good"

New York Agriculture Essay

Liam Sayward, a homeschooled 5th grade student received 1st place in his category for his original narrative he wrote. The students were asked to write an informative narrative, real or imagined, that utilized research and information from a variety of sources to develop their topic or stories. Liam's winning story is entitled, "The Lamb's Amazing Recovery", and a section of his story reads:

"I noticed the first lamb had droopy ear. Her mouth was cold. This meant she probably was suffering from hypothermia. Her body temperature was lower than it was supposed to be. The book says 102-103 degrees F. I gave her an enema, very warm soapy water injected into her anus, to clear the meconium out of her body to warm her up. Then my mom helped me tube feed the little ewe lamb colostrum. But it did not warm her up. The lamb stayed cold and she started to go downhill. I gave her two more enemas. The second one failed, but the third one worked. Lots of black gooey meconium squirted out. I brought her inside the house and turned the oven on to 150 degrees F."

People of New York Agriculture — Students in 6th grade were asked to create a poster that celebrates New York farms or farmers, using a media of their choice. Hunter Newland of Pioneer Middle School created the 1st place poster.

Photo Essay

Marvin Looking Fine

Our summer photo features comes to us from "The Farmer's Husband", a diversified farm in Schoharie County, NY, owned by Thomas McCurdy and Bailey Hale. The farm is currently raising chickens, ducks, turkeys, rabbits, goats, sheep and pigs. Thomas says, "We don't want to be big, just big enough to be self-sustaining, producing as much of our own food as possible while generating an income from the land, likely from a combination of meat, eggs, cheese, bread, fiber, produce, and whatever else we can sell or barter. We want to nourish ourselves and our loved ones while treating the land and the animals with respect, living honestly, simply, and sustainably."

To read more about the farm's adventures in raising livestock, visit www.thefarmershusband.com

Marvin, an East Friesian Ram

GRAZING

I Love My Pasture!

by Denise Timms

This article was one of four winning entries in a writing contest sponsored by the New York State Grazing Lands Conservation Initiative (GLCI). GLCI is led by a Steering Committee of farmers and agricultural professionals to promote the wise use of private grazing lands, and is funded by the USDA-Natural Resources Conservation Service.

James and I moved our family to Madison County from Long Island in September of 2006, after leaving jobs that we had been at for over twenty years each. We were finally going to live our dream on 36 acres of pasture and woodland in a house we built a few years before. We were lucky enough to find jobs, but what were we to do with thirty-plus acres of pasture? In the past, we had some local folks that cut and took the hay as we had no use for it on Long Island. But, what to do now?

I love my pasture!

Photos by Denise Timms

I had a bit of an agricultural background mostly with small livestock, a semester and a half of night time ag classes at SUNY Farmingdale and fourteen years of hands-on experience at two public education farms, both on Long Island. James had been on the grounds crew at the Shoreham Wading River School District for 18 years, 12 of which we worked together. One of the farms I had worked at was located at the Shoreham Wading River Middle School. I was there for 11 years. Unfortunately due to the loss of some of the district's tax revenue, the farm at the Middle School had to be closed. The district was kind enough to move me to the grounds department, and although I was grateful to still have a job, I wasn't quite sure that maintaining athletic fields was going to be my cup of tea. I gave myself six months. Twelve years passed. Being the people we are we weren't happy just cutting the grass - we had to do it all! We learned a lot about grass: growing, maintaining optimum cut height for healthy turf, etc. We went to seminars, got our Pesticide Tech certification (which we rarely had to use due to our management practices), and talked our supervisor into letting us do all the fertilization, over-seeding, etc. We already had all the equipment to do it, and we could save the district some money by not having to contract out those jobs. We found out that we could grow some pretty good grass! What we hadn't realized was how well the jobs we had on Long Island were preparing us for life in central New York State!

So, we decided to get a couple of Herefords. I have always loved them, and the thought of raising our own beef appealed to us. We got a bred cow and her seven month old heifer calf. It was a little rough going at first but that's another story! However, because of the "mishaps" with our first cow experience we met people that would introduce us to something we had never really heard of - "grass-fed beef"! We no longer had to worry about what to do with thirty-plus acres of pasture.

Soon after I was able to attend "Grasstravaganza" in Binghamton, NY and I was hooked! It was there that I met Madison County's own "Grass Whisperer", Troy Bishopp. We've learned so much from him, from rotational grazing to installing a high tensile fence for our permanent/winter pasture. At this point we rotationally graze using temporary fencing, in the open pasture, usually attached to the permanent fence. We also section off the high tensile pasture so we can rotate them in there too.

The pasture walks we have attended, organized by Troy Bishopp, have been invaluable. All of the plant species that we did not appreciate in our athletic fields (we did make sure we had some clover as we returned our clippings) have true nutritional value to the animals that we graze. Weeds in our pasture? Absolutely! Lots and lots of clover in our pasture? You bet! We wouldn't have it any other way.

After we got settled with the cows, we decided to add some turkeys that we would raise as gifts for family. They were quite happy eating not only their grain, but the pasture's offerings. Due to the ingenious invention of electric net, we raised our first small flock of turkeys on pasture with great success. We now raise about seventy-five turkeys and around one hundred Cornish Rock crosses on pasture that we rotate as well. Yes, they do need to get grain, but about thirty percent of their consumption is pasture. They are happy and healthy and grow extremely well, and you should see the grass they can grow!

I'm not through just yet! What started out as a 4-H project has turned three sheep into a pastured flock of 13 sheep that we raise primarily for fiber. They are also the lucky recipients of new pasture every few days. Their fleece is so much cleaner than it would be if we fed them hay all year.

The sheep as well as the cows give birth and raise very healthy, happy lambs and calves being fed our grass, our own hay and of course minerals. We love watching the "families" interact. It is really some of our best entertainment and my personal stress-relieving activity. We were told that turkeys (the commercial type that we raise) don't

Turkey poults enjoying the grass!

Multi-species interaction - I love that electric net!

preen or take dust baths. We have found that out in the pasture they are given the opportunity to engage in natural behaviors and they do!

We found out about the CREP (Conservation Reserve Enhancement) program through a Cooperative Extension seminar. We are now in our second year of a ten year contract through Madison County, now installing our riparian buffer. CREP is allowing us to improve our own program by installing practices that we probably wouldn't have known to do, and helping to attract and protect wildlife, the environment, and the Chesapeake Bay.

Well, I think that I have answered "But, what to do now" with thirty acres of pasture. Raise happy, healthy animals of several species while having them fertilize the fields, provide food for the family while providing us with a great way to meet new people. And, let's not forget all the entertainment! Life is good!

Denise Timms grazes beef, sheep, and turkeys in West Edmeston, NY.
For more information on the Grazing Lands Conservation Initiative please contact Karen Hoffman at 607-334-4632 x116 or karen.hoffman2@ny.nrcs.gov. For assistance with planning or starting up a grazing system contact your local USDA-NRCS or county Soil and Water Conservation District.

GRAZING

Grazing Management in the New Normal

by Troy Bishopp

As a veteran grazier, I'm concerned about the phrases, "The 300 year flood, Peak Soil, Peal Oil, Climate Change and The New Normal" frequently heard in the news. Should I discount them as just an anomaly or should I be planning on how this will affect my grazing operation?

For me, it boils down to a simple concept; keep the soil covered with perennial, highly diverse, biologically active pastures. However it has taken me 48 years of farming to become a true believer and holistic planner in this. It's rather embarrassing to admit I missed this mark as a "yute" while continually being stumped by a grazing system always headed in the path of what Andre Voisin termed; untoward acceleration, where each successive grazing period provides less forage and the rest period is shortened until the rotation collapses. Grazing Consultant, Jim Gerrish, says grazing too short is the biggest problem in production.

With hairline receding and the prospect of a sixth generation farming here, I found the "ah ha" moment I needed 12 years ago in a hurricane and in the mirror. The forces came together after a long dry spell followed in earnest by a 5 inch rain. As I flashed a picture of my swollen, muddy stream, I turned the lens to wipe off the rain and I caught my reflection, this was my fault.

I'm wearing blinders to stay focused on grazing management.

This single event of losing topsoil put me on the path to become a better grazier and in turn a better land manager. But I needed a better plan, more measuring and monitoring and long term goals. I am lucky to live in an era with access to knowledge from influential grazing notables; Andre Voisin to Newman Turner, Darrell Emmick to Jim Gerrish and Allan Savory to Greg Judy to name a few. This has led me to think about grazing in a more holistic, management-driven style predicated on a triple bottom line mentality and stop blaming the animals for over-grazing.

"Create the farm you want" is a quote I like in approaching the upcoming grazing season. Like any good game of chess, it starts with a tactical plan. I start by planning (hypothetically) on my 12 month grazing chart (in pencil) before I go into Mother Nature's domain, around specific financial, production, environmental and family goals. I plan in recovery periods, certain grazing strategies for each field, expected dry matter intakes and plan back from major events such as my daughter's wedding, droughty times, breeding, bluebird fledging, frost and stockpiling dates. This futuristic decision-making and constant monitoring allows me to think deeply about what's ahead and works nicely with my experience and gut feelings to make management changes sooner and level out the new normals of weather.

You're probably thinking, easier to plan than to implement. But the impetus for the organic farmer is if you run out of grass you're out of options. We've got to get in the mindset that it takes grass to grow grass and stop being scared of wasting a little grass if you want top performance for your animals and soil. I do agree that the forage should be trampled, harvested or clipped sixty days before the first frost to enable possible extended grazing of rested plants.

My observations over 26 years of grazing on our farm are this; rain now comes down in buckets and we need to catch it all for the uncharacteristic dry periods that are happening. On our farm, the shorter always vegetative sward of plant species of yesteryear has given way to a taller, more mature grazing style with a higher grazing residual (4") and in turn longer rest periods, averaging 45 days for last season. This has changed my naturalized sward into having a more prairie-like composition which have deeper, stronger roots and puts more litter on the ground to feed the soil microbes.

Having stronger, more vibrant plants has also increased our grazeable days by two weeks in the spring and two months in the fall. This strategy in conjunction with stockpiling has raised our farm's organic matter from 3.4% to 4.6% over the last three years which has essentially drought-proofed the farm while sequestering the big rain and adding resiliency to the whole farm system without buying expensive inputs.

I've been monitoring Brix levels of plants and the cows that eat them and continue to see higher energy levels in more mature swards later in the day especially in young blossoms and leaf tips. To garner more of this production, I move animals 1/3 of an acre in the morning and 2/3 in the afternoon. The difference can be 7 brix in the early morning and double that by 3pm. Capturing this free energy just takes moving a fence. I'm also hearing many farmers having good success spraying raw milk on pastures to raise the energy.

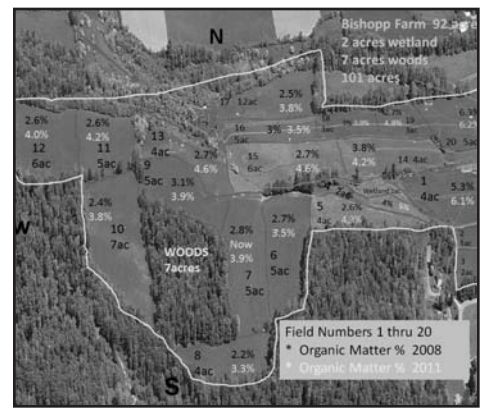
Grazing for energy and not towards Jerry Brunetti's "funny proteins" has been a learning curve, but also good for the wallet as it takes less expensive grain and baleage to even out the animal's diet and production. At the same time it allows the plant roots to rest and add mass in the soil which stimulates soil life and increases water holding capacity.

Probably the most often overlooked questions of grazing management in the new normal are: What are you managing towards and why? Without tangible sustainable goals, you may fall prey to buying prescriptions that fix problems not address root causes.

In my humble opinion, making money from grazing is absolutely about keeping the soil surface covered with diverse swards and soil life collecting solar energy while sequestering moisture and carbon. One only has to remember 2011 to see this is a great strategy for the future.

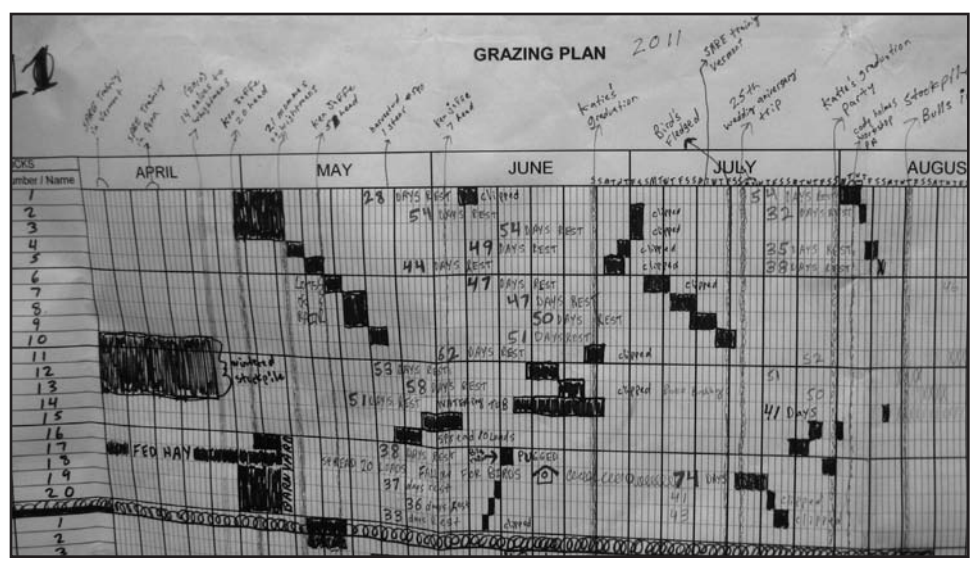
How do you get it done? Create farm family goals that incorporate the triple bottom line, plan out in detail how to make these goals happen, question everything, measure and monitor progress often, join a mentoring team, record your results and most of all have fun honing your grazier's eye because the world needs more pasture-based systems.

Troy Bishopp aka "The Grass Whisperer" is an everyday practical steward, observer, teacher and 25 year veteran farmer and grazing professional in working with biologically active, financially viable and sensory pleasing, diverse, perennial pasture systems. Learn more at www.thegrasswhisperer.com/.



Change in levels of organic matter on our farm map. Photos by Troy Bishopp

Five inches of rain seems to be the 'new normal'.



My grazing chart from 2011.

LOCAL FOODS & MARKETING

Faces of our Food System: Garden Gate Delivery

Get to know a local food distributor in our 2012 feature series

by Becca Jablonski

This article is the third in a series highlighting distributors of New York State farm-grown products. For our third spotlight, I spoke to Marlo Capoccia, the Owner of Garden Gate Delivery, located in Ithaca, New York. I wanted to feature Garden Gate as they recently made the decision to shift their business model to focus on providing freight services for the growing Community Supported Agriculture (CSA) farms throughout the Tompkins County region. Whereas many CSAs purchase their own vehicles, out sourcing this delivery function can be more cost effective and enable farmers to focus their attention on farming. Thus the service that Marlo and Garden Gate provide farms can be an important part of improved farm profitability.

Ryan Barrows, a driver for Garden Gate Delivery, arrives with a home delivery.

Q: When you started Garden Gate Delivery in 2008, what was your initial vision and model for the company?

A: I wanted to bring as many local products to families as possible. It was a 'milkman model' that I had in mind. I thought that if I went out to various farms to get yogurt and meat for my own family, that I could also do it for other families too. So I bought a truck and got in touch with 10-15 local suppliers. I did my best to get an assortment of meat, bread, fruits, vegetables, and dairy. Next, I set up a website to ensure that everything was as convenient for the would-be customers as possible. I was trying to reach people who were interested in local foods, but my real goal was to try to convert people who were buying at the grocery store to buying local. I knew that the key would be convenience. The website enabled customers to pay online (90% of our sales are credit card based), and thus not worry about writing checks or leaving cash. The home delivery portion of the business was also really just to make it simple.

As we went along, much of the function of the business became more about education. People do not just want to buy stuff. For example, as we started offering CSA shares, we saw that people might drop off in the second season. People would get broccoli rabe or kohlrabies as part of their share and not know what to do with it. So we implemented an educational piece through the website and started writing a weekly newsletter. We also did a series of cooking classes one summer a few years ago, and they were very well attended, but it is a lot of work with just me running the business. I have received many requests to start the cooking classes again. And, as much as I love the education piece, it isn't really what makes Garden Gate money. So I need to figure out how to make the business successful so that I can do the educational piece, which I love, or find a way for the educational piece to financially support itself.

Q: How has that vision and model changed over the years?

A: Last year when I sat back to really look at the finances of the business, I realized that we were much more efficient when we were doing the CSA deliveries rather than our own deliveries. When we handled everything in-house there was more room for error and mistakes - packing, repacking, sorting, labeling, etc. Doing just the CSA deliveries cut down on our costs, and particularly the need for labor, which meant we could reduce our delivery fee. It has been really appealing to work with The Full Plate Farm Collective (see: http://fullplatefarms.webs.com for more information). The Full Plate Farm Collective CSA started with some fruit and vegetable CSAs working together to increase the diversity of their offerings. But then they added 'spoke' farms so that they could offer expanded shares of other types of products - meat, dairy, baked goods, etc. This kind of model works great with Garden Gate's new business strategy as we can help coordinate pick-ups and deliveries from the various farms and customers are happy because they have expanded options.

Q: How many growers or CSAs do you work with?

A: We have 10 CSAs we work with, and that includes two Community Supported Kitchens (for more information, see: http://crookedcarrotcsk.com.

Q: What type of response do you get from the CSAs for whom you do deliveries?

A: Mostly they are relieved not to do the delivery themselves. It is my goal to take as much of the work off their plate as possible. So at some point we may offer to take all of the CSA orders through our website and just give farms the total number of orders. Right now we do routing, and are starting to do some marketing - and of course the delivery. This takes about 10+ hours of work per week away from the CSA farms. Plus, it makes them look good, since they can expand offerings to their CSA members through increasing access to the other CSA share options.

Q: Is there demand from other CSAs to increase the availability of distribution services?

A: Yes! We are trying to figure out how to grow our business to meet the demand.

Q: What are the challenges you face working with the CSAs?

A: Working with multiple CSAs is difficult in terms of timing - certain product has to get to businesses or specific places at certain times. For example, the bakery doesn't finish baking until 10:30am, but I want to start deliveries at 8:30am. So managing the timing issues is tough. Also, sometimes the CSAs have made commitments to deliver to certain businesses at certain times and managing those scheduling issues is a challenge. I also need to make sure that the delivery routes make sense for my business.

Q: Are you looking for additional CSAs to work with?

A: Yes, but not immediately. We are still tweaking the model, and once we have it right we will certainly start looking for more CSAs.

Q: If farmers are interested in working with Garden Gate Delivery who should they contact?

A: I am happy to be a resource for anybody looking for ideas about how to start a distribution company, but I am not capable of delivering outside of Tompkins County at this point. If farms are looking for delivery within Tompkins County, they should email me at: marlo@gardengatedelivery.com. Also, I encourage everyone to check out our website: www.gardengatedelivery.com

Becca Jablonski is a PhD student at Cornell University conducting food systems research. She may be contacted at rb223@cornell.edu Thanks to the following funders for their support of local food distribution research: the Cornell Center for a Sustainable Future, NESARE, and the Cornell Small Farms Program.

LOCAL FOODS & MARKETING

Wanted: Infrastructure Real and Virtual

by Beth McKellips

When I first moved to Madison County in central NY, I was surprised to learn that very few farmers were selling products in the NYC market. In my fresh perspective, connecting upstate farmers to NYC seemed like a fairy tale waiting to happen. Madison County had rolling hills that were not being plowed under to create quarter acre lots, farmers who genuinely wanted to farm these hills as well as the lowlands in between, and plenty of businesses that sold things the farmers actually use. On the other end of a relatively short 4 and a half-hour trip was one of the most dynamic and demanding consumer markets for food. So, in my first few months of running a Cornell Cooperative Extension program aimed at expanding marketing channels for farmers, I focused on learning how to connect farmers to the NYC market, calling on Baldor, Red Jacket Orchards, GrowNYC/Greenmarket, the Park Slope Coop, Pampered Cow, and…..in fact, I called pretty much every person I knew that bought or sold local food in NYC. More than once, I filled my Subaru with Madison County-made Kriemhild Meadow Butter and headed to the city to disperse rack cards touting all kinds of Madison County products everywhere I could. In a matter of months, I had made a rather complete circuit of the local food scene in NYC. I told everyone I met that it just has to be easier to help upstate farmers sell food downstate. I naively assumed that if I built it, they would come.

My whirlwind tour of the NYC local food market recently culminated with organizing a panel of wholesale buyers and distributors who have stated interest in purchasing food grown in New York State. Upon reflection of the dialogue that unfolded at this panel and my self-guided tour of the NYC local food sector, I was, in a word, wrong. There are significant structural changes needed that are much deeper and complex than creating marketing campaigns to connect the dots of upstate production to the downstate market. It is not impossible for farmers outside of the Catskills and Hudson Valley to burst the NYC bubble, but it is not easy. There are very real and tangible reasons why almost all the farmers I meet in Madison County and central NY ask for help with marketing and talk about how they need to sell more product, and on the flip side, there are concrete reasons that more stores, restaurants and institutions in NYC don't buy more food grown in New York State. Overcoming these obstacles is not going to happen quickly or without considerable effort and most likely will require some government intervention. The following is a brief description of where to start.

Step One: Physical Infrastructure

The need for physical infrastructure in the form of a distribution hub where products could be aggregated, packed into marketable packages and stored to preserve freshness before making their journey to market in a re-fridgerated truck, quickly emerges as one significant missing link. Farmers are typically financially leveraged to their full capacity and tend to be asset rich but cash poor. Consequently, most farmers lack the ability to borrow capital to purchase these extremely expensive storage and transportation systems without taking a serious financial risk and going into deeper debt. A publicly funded distribution hub (or a public-private partnership) would open the door to markets of magnitude to upstate growers with one fell swoop.

A food distribution hub could allow farmers like Terry Mosher, seen here talking to Greenmarket/GrowNYC Wholesale Market Coordinator, Nathan Forster, to aggregate produce to meet the volume demands of the NYC wholesale market.

The buyers at the local food buyers panel mentioned purchase volumes along the lines of a quarter million dollars worth of produce. Each buyer at the table indicated a desire to purchase more product grown in New York. However, these food outlets need a consistent supply for logistical reasons and to meet consumer demand. Also, even though at first blush it might seem easy to assume that most stores in NYC want to buy pallet upon pallet of products, many specialty stores in NYC and Brooklyn have limited storage and refrigeration capacity due to small scale of the NYC urban fabric. Consequently, they need to order often and have products be delivered in small batches. The combination of the need for consistency and to receive products in small doses compounds the need for physical infrastructure upstate, where product can be consolidated from multiple sources, stored and repacked without losing quality.

Lastly, while there are some shining examples of food distributors who work with food produced outside of the New York City market, such as Regional Access and FingerLakes Farms, as the price of energy grows, their ability to pick up products from multiple farmers, especially low-volume producers, is going to be an uphill battle and they might increasingly need product aggregation.

The Other Step One: Technological Infrastructure

One of my favorite moments from the recent local food panel was when a Cornell Cooperative Extension colleague asked the buyers, “I assume you all have farmers calling you all the time, right?” and the entire panel shook their head no. While this baffled the agricultural professionals in the room who tend to receive these calls daily, this exchange highlights another significant need in building a vital regional food system, technological infrastructure. While some farms have grabbed the internet and social networking bull by the horns and have done quite well, traditionally, the non-commodity agricultural sector has come relatively late to the technology party, especially in terms of consumer-friendly websites with robust databases that allow customers to purchase local food. The lack of development of online technology is due to several complex factors beyond the scope of this discussion, but include the scarcity of capital not tied up in production, lack of technical knowledge, and the labor and time demands of farming that don't allow for a plenitude of screen time. Farm websites in rural areas tend to be behind the times in both design and functionality. On the flipside, local food buyers in the city don't know where exactly to turn when they want to find a product produced in New York and usually depend on what their distributors can bring them. Store and market managers, institutional buyers and local food distributors need to have viable options for finding local products at their fingertips (literally) and this database needs a robust backend that can support real time inventory changes. We need a business-to-business “facebook” for food. There have been several inroads in this realm, and many more are in development, but for now the non-commodity farming industry remains a bit in the technological dark ages.

This mixed lettuce pack is an example of how a packing house and storage facility could allow growers to package their products to make them more attractive to restaurant and other institutional buyers.

To Be Continued….

The story of upstate growers beyond the Hudson Valley and the Catskills region providing products to the demanding downstate market does not appear to have a fairy tale ending at the moment. While NYC is far from the only viable market for central NY farmers, the sheer volume of NYC demand highlights how a happier ending is within reach if policy makers, developers and/or the private sector could work together to create the physical and virtual infrastructure needed to connect upstate growers with the NYC market. Fulfilling these needs would allow farmers to focus on farming and producing the best food they can. At the local food buyers panel, the agricultural professionals in the room had potential to connecting over 1000 farmers with the local food buyers who spend over $150,000 annually on produce on the low end. Frankly, I would be surprised to learn if even one sale was initiated at this panel. It's time to quit putting out the fire one bucket at a time and bring on the hose, in the form of publicly-funded infrastructure that will bridge the gap for the farmers to the large, practically insatiable NYC market.

Beth McKellips is an Agricultural Economic Development Specialist with Cornell Cooperative Extension in Madison County, where she creates programs to connect farmers with marketing opportunities, diversify through value-added products and provides business and technical support. She can be reached at 315.684.3001 x 126 or at bam233@cornell.edu.

Local Foods & Marketing

Home Grown Cow: An Easy Way to Get Into Online Sales for Meat, Poultry, and Cheese Producers

by John Aikman

"Where did you get these steaks? They're fantastic!" is the usual reaction from friends from out-of-town to eating beef at my dinner table in South Central Wisconsin. Some of these dinner guests have even asked me to mail meat to their homes in places as far away as Miami and Atlanta because they loved it so much.

My family enjoys beef from local farms in South Central Wisconsin. It varies in type, but whether Angus, Scottish Highland, or Holstein, it is always tender, tasty and of course, most importantly, I know where it comes from and how it was raised.

Though not a farmer myself, I grew up in a small market town in the UK where the sights and sounds of the livestock yard on market day were something that every kid was familiar with. I spent most summers in my mother's native Italy where grandparents raised cattle, pigs and rabbits for dairy and meat for family consumption. As a result I have a great understanding and love of farming culture and traditions.

Sometime in 2010 I took a call from a friend asking if I wanted to buy a quarter beef from a farmer friend of hers. The person who had agreed to buy it had bailed on her and she needed to find a new buyer fast. That was the beginning of Home Grown Cow.

Solving the Equation

I suddenly realized that I was looking at two sides of an equation that was missing an "equals" sign. Friends with their craving for delicious, farm-direct meat; and busy farmers without an easy or lucrative way to reach a growing market of hungry online shoppers.

My wife, Karen and I, met with farmers, and heard about the challenges of local bulk beef sales, people backing out, customers not paying, the importance of timing, processing, the dangers of listing your farm with unverified classified ad sites, and so on. It became clear that many farmers are being left behind by a digital world of online sales marching on into the future without them. Further research also taught us that smaller, more traditional farms are having an increasingly tough time due to the continuing vertical integration of the industry, which has forced most of them to become price-takers rather than price-makers, and that a small number of very big companies control more than 80% of the meat supply in the United States.

It was time to act; I called my old high school friend Dom Lindars on the west coast, entrepreneur, programming wiz-

John Aikman, Home Grown Cow Co-Founder and an associate.

Photo by James Blakeslee, Madison, WI

Hermione Grace Cow, Home Grown Cow's logo drawn by John's children.

ard and rocket scientist among many other things. He was looking for advice on whom to hire to build the site and what sort of components it would need. By the end of the phone call, Dom, now my business partner, had agreed to create the site from the concept I had dreamed up which now serves farms and customers nationwide, and www.homegrowncow.com was born.

Home Grown Cow serves two groups of people. First and foremost it serves farmers who, they have learned, can be held back from engaging in e-commerce because they lack time, money or the necessary skills to do so. Home Grown Cow ensures that they have an easy way of listing their farm and selling their products online at absolutely no cost to them. The second group of people of course is the customers - affectionately known as "Eaters", and the goal for them is to offer choice and transparency in the meat, poultry and cheese that they put on their table.

How it All Works

From the farmers' perspective Home Grown Cow helps eliminate a number of headaches common to online sales. First, the farm profile is easy to set up and use and costs nothing, so no web designer or hosting fees are needed. It's as easy as setting up a Facebook or E-Bay account. No Internet access? No problem - you can fax the information and the team will set it up for you. Secondly, Home Grown Cow accepts credit card payments up-front, so farmers never have to worry that the customer will back out of the deal, or that they won't get paid. Thirdly, for farms that want to ship, we help with that too - calculating and collecting shipping fees from customers and producing packing slips and airbills that are e-mailed to the farmer after the sale is accepted. All the farmer has to do is package up the goods, stick on the label and get the package to the carrier's nearest location. We also provide guidance on how to do that, and shipping rates are 62% of the standard shipping rates advertised by the carrier which is welcomed by far-flung Eaters. Finally, Home Grown Cow accommodates all kinds of meat, poultry and cheese producers; farms can list everything from a whole beef to an emu fan steak. Products can be USDA-inspected, state-inspected or custom-exempt inspected, and this is clearly communicated to the customer at the time of purchase along with what each of them means.

Other advantages include the ability to list products well in advance of their availability dates and pre-sell them, a huge help with inventory and cost management, and the Home Grown Cow "Safety Net" which protects Farmers by collecting funds up front and Eaters by holding payment to farms until after the goods are satisfactorily received.

Something for Everyone

The variety of people shopping online for meat is enormous. There are people shopping for value - bulk "freezer meat"; those who want to know that their meat contains no added hormones or antibiotics; there are fancy folk who might want to serve "American Kobe Beef" at a special dinner; and gentle souls who take solace in knowing that their meat was raised especially humanely, to name just a few. Home Grown Cow, with its growing group of participating farms uses simple check boxes to identify customer preferences, and farm practices so they can be matched up.

Home Grown Cow offers an ever-increasing variety of meat, poultry and cheese to consumers all over the country at prices that are generally less expensive than more traditional sales channels even with the 15% service fee that is included in the retail prices. The fee covers transaction costs, marketing costs and operational costs associated with running the site.

Of course the best part about Home Grown Cow is that it's free for farmers to use - so there's no risk involved in giving it try. Even farms that already have an online store can reach customers with Home Grown Cow that they wouldn't otherwise reach on their own, and farms with a web-site with no store can use Home Grown Cow as their store simply by linking to their farm profile at www.homegrowncow.com

John Aikman is Co-Founder of Home Grown Cow, LLC, a national company based in South Central Wisconsin. He may be reached at john@homegrowncow.com.

Zorro the bull, from Thistle Hill Plantation in Eolia, MO. Photo by Bruce Denslow

Home Grown Cow removes the constraints of time, skills and money that keep small farms from engaging in e-commerce.

Home Grown Cow is a free, instant, easy-to-use online sales presence that:

- Provides an online farm store
- Takes credit card payments
- Does your Internet marketing
- Handles nationwide shipping

And…

- Customers pay up-front
- Participation is free
- Farms are paid quickly

How does it work?

Farms set up a Farm Profile and list their available products. Home Grown Cow markets and sells them to local and national markets.

Farms identify themselves according their meat, poultry or cheese, and farm practices. Customers search based on these choices and find exactly what they're looking for. The goal for farmers is a no-cost entry into e-commerce, and for consumers it's choice and transparency of the meat, poultry and cheese that ends up on their table.

Any meat, poultry or cheese producer can use Home Grown Cow; it's as simple as Facebook or E-bay to set up. Farms can ship, deliver or permit pick-up of their orders. For shipping, Home Grown Cow has deeply discounted rates that are calculated and charged to the customer up-front along with their order. Farms receive an airbill by e-mail or fax and products can be picked up or dropped off by the carrier.

Consumers pay for the service in the form of a service fee that Home Grown Cow adds to each sale.

Home Grown Cow is completely free for farms to use. Producers can learn more and sign up by visiting www.homegrowncow.com/farmers, calling 608-515-5335 or writing to info@homegrowncow.com.

LIVESTOCK & POULTRY

Considerations for Pasture Lambing and Kidding

by tatiana Stanton

We associate spring time with newborn lambs and kids frolicking on green pastures. However, Northeast sheep and goats often give birth indoors in winter. This makes sense for farms targeting the Easter market for suckling lambs and kids or providing show prospects for the summer show circuit. If you do not sell to these early markets, then delaying and birthing outside in the spring when the grass is up may be perfect for you.

Approximately 30 Northeast sheep and goat farmers are participating in a Cornell project reviewing labor and feed costs for different birthing systems. To date, the project has uncovered some interesting results. Labor demands were substantially more for farms giving birth in Winter '09 as compared to Spring or Fall (Figure 1). Furthermore, when comparing barn and pasture birthing in Spring '09 (Figure 2), no pasture birthing farms lost dams at birth, although 3 of 4 barn birthing flocks had dams die. A huge benefit of pasture birthing is that dams can separate themselves and birth undisturbed leading to fewer dystocia or mothering issues. However, Goat Farm #3 experienced Floppy Kid Syndrome during birthing. If the same disease had occurred on pasture, kid losses might have increased because of difficulty treating collapsed kids.

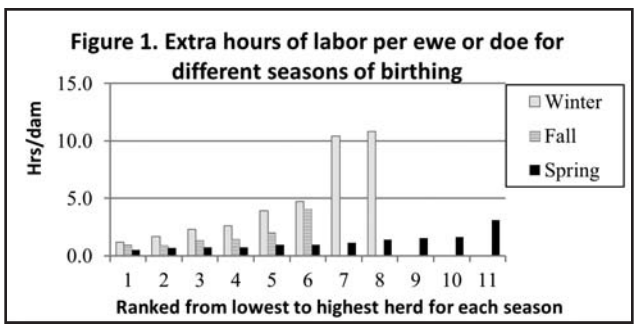


Figure 1

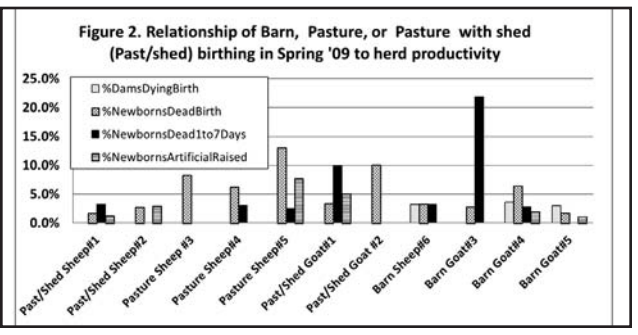


Figure 2

Article Definitions

Creep feeding — establishing a pen that offspring can get into but dams cannot so offspring can get extra feed to supplement dams' milk, useful for triplets or offspring from low milk producing dams.
Dystocia — Labor difficulty due to malpresentation of the lambs/kids or large size in relationship to pelvic cage or dilation.
Grannying — the hormone-driven stealing of newborns by another dam as she goes into labor.
Jugs — small portable pens to temporarily put a dam and her litter in after birthing to facilitate bonding.

Additionally, for Spring '09 birthing farms, feed costs for pasture-birthing goat herds averaged $6.80 per dam as compared to $21.74 for barn-kidding herds (most on pasture after 1 month) and $8.14 for pasture-birthing sheep flocks as compared to $42.86 for barn-lambing sheep flocks (most in barn through weaning). Dams that are limited to the barn for birthing consume harvested forage that could be reserved for winter feeding.

The success of pasture birthing is dependent on planning ahead for several factors.

Choosing a Birthing Pasture

Birthing checks can be done quickly (even with binoculars) if birthing pastures are close to the farm and dams are clearly marked ahead of time with spray paint. Thus, pastures bordering your barn or house are most convenient, especially if you anticipate returning triplet litters or "orphans" to the barn for more intensive rearing. Unfortunately these nearby pastures are often your winter loafing areas and by spring are heavily contaminated with manure and internal parasites. Many worms successfully overwinter outside (brown stomach worm, nemotodirus). Barber pole worm, our deadliest worm, does not survive outside in winter. It "hibernates" as immature larvae inside your sheep or goats. However, its dormancy breaks by early March and livestock then shed barber pole eggs in their feces. Therefore, you must plan ahead to insure that your livestock don't access the proposed birthing paddocks over the winter.

Plastic rain covers for lambs are not readily available in the U.S. but can be handmade using plastic bread bags.

A second decision you need to make is whether to "set stock" or "drift lamb" during your birthing season. Most farmers in our study practice set stocking. Two weeks prior to lambing, one very experienced study farmer runs his flock through a working chute and spray paints them starting with the number 1.The first 40 ewes go in his first 5 acre birthing paddock, the next 40 in the next 5 acres, until all 300 ewes have been assigned a paddock. When lambs are born they receive the same spray paint number as their dam. Thus, for every lamb he can identify its paddock and dam. His system hinges on having plentiful grazing in each paddock to last the 6 week long birthing season. After lambing the flock is combined and rotationally grazed. Water should be centrally located in birthing pastures to discourage dams from having to travel far from their young to drink. Advantages of set stocking are that ewes pick out a nesting area and are undisturbed until they and their lambs decide to rejoin the flock.

In contrast, some study participants move their animals with temporary fencing every 1 to 5 days and must disrupt dams shortly after/during birth when it's time to shift to the next grazing paddock. This can result in poor bonding between dams and offspring - leading to rejected offspring. Some farms have adopted drift lambing procedures where ewes that lamb during the 1 to 5 day period are left behind to form their own grazing unit to eventually combine with other "left behind" units. However, many farmers only have a few dams giving birth during a paddock move. These dams may panic if left behind. One option for smaller flocks is to move the temporary fence forward but let the "back" fence remain in place for at least one extra shift. Thus, dams that have recently given birth can stay in the previous grazing strip without being separated from the flock. You need good grazing in the previous strip so that hunger does not cause dams to move forward prematurely from their nesting site. However, letting grass get excessively tall can cause problems especially for breeds that hide their young, because dams may lose track of where they have stowed their offspring.

Birthing checks can be done quickly (even with binoculars) if birthing pastures are close to the farm and dams are clearly marked ahead of time with spray paint.

Planning for Inclement Weather, Mothering Issues and Predation

Weather patterns can change radically in spring time. Have a contingency plan to get animals to shelter in case of sudden snow storms or freezing rains. Many farms utilize hedgerows, woodlots, or dead drops during the birthing season. However, keep in mind that dams may mob shelters during bad weather. Any artificial shelters should be very open with wide entrances to try to avoid trampling of newborns. Grannying (stealing of newborn by another dam near parturition) may also occur when animals crowd together in bad weather. Plastic rain covers for lambs are not readily available in the US but can be handmade using plastic bread bags.

If your fence line is electrified, the metal corkscrew tie-out stakes for dogs are helpful to restrain dams with dystocia or hesitant to nurse young. Avoid setting up jugs in birthing pastures if possible because the whole flock may try to get to the feed in them and collapse the jugs onto newborns.

Several farms on our study experience no predation problems while others with similar fencing have problems with coyotes, foxes, or great

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Livestock & Poultry

Backyard Poultry 101

by Nancy Glazier

Chickens are an easy way to raise your own meat and eggs. They don't require a lot of work or time and flocks are great for kids to care for, from collecting eggs to feeding and watering. Birds need to get off to a good start; healthy chicks, proper nutrition, water and shelter equates to the beginning of a healthy productive flock!

The first thing is to find a reputable source for chicks. Buy from one hatchery to reduce the risk of bringing disease onto the farm. Most hatcheries will ship chicks within one day of hatching. Some will vaccinate if you request them. Many of the old-time diseases are making a comeback since chicks may not be vaccinated. Vaccines to consider include Marek's disease, Newcastle, and Infectious Bronchitis. It may not be necessary for broilers, but laying hens hang around for several years which increases their health risks.

Have housing ready for chicks; they will need a heated brooder for a few weeks before they venture out. If you had a previous flock, the pens or house should be thoroughly cleaned and allowed to dry to reduce the risk of infecting the young birds with diseases. Disinfectants containing quaternary ammonium are good choices.

Upon arrival, give each chick a drink of water; they have been without food and water since they left the hatchery, so they will be thirsty. Feed and water should always be available. Feed can be commercially purchased or mixed at home. If farm-mixed, make sure all essential vitamins, minerals and amino acids are provided or deficiencies will develop. Your local feed mill can mix a ration for you if you purchase a quantity.

A dry and ventilated living area is important to keep the flock healthy. Bedding should be dry with shavings or straw added when needed. A closed-up coop can lead to respiratory diseases and build-up of ammonia from manure. Visitors to the farm that have their own flocks should wear clean shoes to prevent spreading diseases. Limiting exposure to wild birds can also reduce the risk of diseases. Rodents can be disease carriers, so keep them out of housing and feed.

Parasites - both internal and external - can reduce productivity. Chickens can become infested with mites and lice. Signs are feather loss and reduced egg production; severe infestations can cause death. Spraying or dusting with carbaryl will control the pests, and providing an area for dust baths will help. Most common internal parasites are roundworms and tapeworms.

Another parasite, cocci (protozoa) causes coccidiosis that can cause high mortality in young birds. It can be more common in wet and humid conditions, and can be controlled with medicated feeds containing coccidiostats.

Predators can be real problems in rural or suburban areas.

Some happy backyard chickens.

Foxes, raccoons, weasels, hawks, owls and even the neighbor's dog can prey on the flock. Guard animals, like dogs and geese may help protect them. Free-ranging flocks should have a safe place to roost for the night.

For more information on poultry health, visit the National Poultry Improvement Program at www.aphis.usda.gov/animal_health/animal_dis_spec/poultry/

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Lambing *from Page 17*

horned owls. Dispose of stillbirths and uneaten afterbirths quickly so that local predators do not cultivate a taste for them. Some farmers prefer not to band tails for fear that discarded tails encourage predation. Most study farms with a history of predation successfully combat it with guardian dogs, llamas or donkeys and improved electric fencing. They still run into problems if dams are birthing in too large an area (i.e. 120 ewes on 25 acres) because one or two dogs are insufficient, especially if the terrain is hilly or forested. If predation challenges continue both night and day, some farms combine guardian species so that dogs patrol at night and llamas/donkeys take over during the day.

Handling Birthing Checks and Management Tasks

How often a farmer checks a birthing pasture depends on how difficult it is to catch newborns. Most kids are awkward on their feet for a couple of days after birth. This is not true for many breeds of sheep. Most sheep farmers doing pasture lambing try to conduct all their birthing tasks (spray painting, ear-tagging, tail docking, etc.) when they first spot a new litter. Be sure to catch the entire litter to avoid the dam taking off with some of her offspring. You'll get good at holding several newborns between your knees. Catching can be done using a leg crook or fish net. You must desensitize dams toward this equipment prior to birthing.

You'll need a good tote to carry your equipment cross country. Favorites include 5-gallon pails (good to sit on), carpenter belts, small coolers, and carpet bags (good for stowing an extra lamb). Wooden crooks help to traverse electrified fences. Banding is the most commonly used method for tail docking and castration as farmers have no access to electricity and want to avoid open wounds. However, some farmers delay docking until birthing is done and animals can be brought to an electrified barn. If you have a good quiet herding dog or are working with goats, newborns can be processed as 2 day olds when hardier.

Creep feeding to supplement dams' milk is challenging on pastures because offspring want to follow their dams instead of congregating at a creep. Locate the creep near places where dams tend to lie down to chew their cud (near water, gates, or shade) to encourage offspring to explore it. Make sure the creep is well built so that the flock cannot collapse it.

Internal Parasites

Nursing dams and their suckling offspring are vulnerable to internal parasites especially when pasture conditions are warm and damp as in late spring and summer. Animals should be monitored frequently for anemia (FAMACHA scores and lethargy), diarrhea and poor body condition, and selectively dewormed as necessary. In temperate climates barber pole populations peak about 35 days after the egg laden manure is deposited on a pasture but drop substantially by 60 days. Highly susceptible animals should be moved out of a paddock within 5 days and not returned for greater than 60 days. The pasture may need to be brush hogged or grazed by a different species during the extended rest period to keep from getting too mature.

Pasture birthing is not for farmers who feel they'll have too little control of birthing at a time when their labor and attention needs to be focused instead on hay or field crops. However, with wise advance planning, pasture birthing is a successful alternative for many farms to explore.

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On left:
Some farmers prefer not to band tails for fear that discarded tails encourage predation.

BUSINESS MANAGEMENT

Is a Farm Loan Right for You?

by Noreen Atkins & John Flocke

Nathaniel Thompson approached the Cortland NY FSA Credit Team in 2006 for loans to purchase a 5 acre parcel of land and build a barn in an attempt to expand his business. Nathaniel is an organic vegetable farmer, specializing in salad greens and root crops. He markets his produce as Remembrance Farm, to local restaurants, grocery stores, and through the Full Plate Collective CSA in the Ithaca NY area, and always is attempting to expand his customer base.

At the time of his initial FSA loan application Nathaniel had been in business for 3 years and had recently moved his operation from the Hudson Valley to Tompkins County. At that point he was renting 10 acres of land South of Ithaca, NY. He had already established a solid customer base in the Ithaca, NY area and the business had a history of increasing sales. He planned to rent 15 acres of cropland and incorporate a sustainable cropping system to be the centerpiece of a biodynamic organic farm. To ensure such a project worked Nathaniel decided to purchase land adjacent to the rented tract.

The rows of greens are growing for Remembrance Farm's CSA customers.

Photos by Emily Thompson

Nathaniel soon realized he would have little equity to purchase the real estate after closing costs and sought financial help to boost his business. After he was unable to obtain commercial credit for the land purchase and to construct the barn, he turned his attention to the NY Farm Service Agency Farm Loan Programs available to him. FSA was able to approve his request to purchase the 5 acres of land and build the cleaning/processing barn along with loans to refinance his equipment debt, purchase additional equipment and provide annual operating expenses.

Nathaniel's vision of a truly biodynamic farm was first initiated by adding a powerful ally, chickens. These birds play a crucial role on the farm by transforming the grain and pasture into fertilizer for the crops grown. The chickens are set out to pasture and rotate around the farm to consume the grasses, cover crops, bugs, and organic grains while leaving their special brand of organic fertilizer. The eggs are then sold locally and distributed through the farms CSA. The addition of chickens has allowed the farm to become not only a certified biodynamic farm but a model of sustainability.

Since the first FSA loans were closed, Nathaniel's business has continued to grow, with gross income tripling since 2006. This boom has been assisted by additional FSA operating loans and a farm ownership loan. These loans and the overall success of the farm has allowed him to purchase an additional 35 adjacent acres, add high tunnels to his operation, expand his barn and build a machine shed. All of this expansion became a reality with the help of FSA and the dedication of a great New York State farmer.

For information on Remembrance Farm, visit remembrancefarm.org/. For more information on Farm Service Agency programs, visit your local (county) office. You can find their locations by visiting: www.fsa.usda.gov/ and search by state and then county.

Chickens are a very important aspect to the biodynamic nature of Remembrance Farm.

Nathaniel & Emily Thompson of Remembrance Farm.

RESOURCE SPOTLIGHTS

Report Rare Nuts, Please!

NY Nut Growers Association Seeks to Preserve Heirloom Nut Trees

by John Wertis

In the 1930's, a lot of interest developed in growing English (Persian) Walnuts in New York State. The Canadian Minister, the Rev. Paul Crath, had collected seed nuts and seedling trees from his native Poland and was growing them successfully in Southern Ontario. He formed a partnership with S.H. Graham, a nurseryman in Ithaca, NY, and many Crath Carpathian strain trees were marketed and planted throughout NYS and in other parts of the country through the 1950's. Many of these trees have survived freeze, drought, and the Walnut Blight and continue as producers of large, crackable, tasty nuts today.

The NY Nut Growers Association is seeking out Crath Carpathian and perpetuating their germ plasm by grafting and growing them on member's farms and at the John Gordon Demonstration Nut Grove in Trumansburg, NY.
Readers are encouraged to report the location of such trees to the Nut Growers Association for our expanding data base and for possible use in the "Heirloom Program". If you have a large "English" walnut tree growing on your property that is producing a crop of edible nuts with some regularity, chances are good that it is of the Crath Carpathian strain and the Nut Growers Association would like to hear from you about it.

The NY Nut Growers Association also sponsors an annual internship in which individuals spend three full days gaining practical, hands-on experience in growing nut tree seedlings for "stock", collecting and processing "scion wood", and carrying out the grafting and callusing processes employed in asexually reproducing valuable nut trees of several species.

For more information on the internship, or to report a rare tree, visit www.NYNGA.org, or contact John Wertis, president, at 607-387-4331, or bwwfarmtoday@aol.com.

The "Stanley Carpathian" strain on the farm of the Roggan Family near Stanley, NY. NYNGA has made successful grafts from this tree.

HORTICULTURE

Grow Berries for All Seasons

by Cathy Heidenreich and Laura McDermott

There are many reasons that growers would choose to extend the cropping season for berries. The earliest berries notably capture the best market prices - which is what growers strive for. On the latter end of the season, there may be late season marketing opportunities, and certainly creating as long a time as possible for berry sales is a good thing. Season extension techniques may improve yield, fruit quality and shelf life, and possibly allow us to grow a wider variety of berries, all attributes that growers and consumers can be happy about.

When season extension is discussed lately, it often includes plant manipulation techniques, like tipping raspberries or removing blossoms of strawberries, or it might refer to environmental manipulation like using row covers or high tunnels to temporarily provide protection from an unsuitable environment. The easiest thing a grower can do to extend the berry season is to choose to grow berry crops that compliment each other seasonally, and then choose varieties that provide plentiful, high quality berries throughout the harvest season.

The following summaries are meant to be examples of the way a grower could choose overlapping varieties that would keep fresh, nutritious berries in front of his/ customers for the longest possible time - without doing any crop or environmental manipulation. As customers come to rely on local farms for their fruit needs, that will provide the incentive for more elaborate season extension efforts.

These summaries are not inclusive. There are dozens of varieties that could be substituted for the ones mentioned below. Growers should always try different varieties as fruit characteristics may differ between locations. Additional information about these and other varieties as well as the nurseries where you can order them is located at www.fruit.cornell.edu/berry/index.htm

The earliest berries in New York State are strawberries. Traditional June bearers and Day Neutral strawberries begin producing in May or June, depending on the microclimate. In cooler regions and with good variety selection, June bearers will continue into July, but day-neutrals will provide customers with fresh strawberries into October throughout most of New York - with just a bit of attention to frost protection.

Strawberries taste like spring!

Photos by Cathy Heidenreich

Additionally, many other berry crops will start production in July including blackberries, blueberries, currants, gooseberries and raspberries. Many of these can continue into September and possibly longer if the correct varieties are chosen and with slight modifications to environment. Elderberries ripen in August and hardy Kiwifruit, soon to be very popular with consumers, is a great addition to the September market table.

Choosing the best berry varieties is not an easy task. There are hundreds of options, all touted to be the most delicious and productive. Growers need to consider local customer preferences in addition to pest resistance, vigor and timing. The lists in Figure 1 may provide you with ideas for new varieties to try next season.

Fruiting Time	Blueberry	Summer Raspberry	Fall Raspberry	June Strawberry
Early Season	Duke Reka	Prelude Reveille	Caroline Autumn Bliss	Earliglow Wendy
Early Mid-Season	Blueray Patriot	Killarney Canby	Ruby Fall Gold	Darselect Honeoye
Mid-Season	Bluecrop Blueray	Latham Liberty	Polana	L'Amour Cabot
Late mid-season	Darrow Chandler	Titan Taylor	Josephine	Allstar Sparkle
Late Season	Elliott Liberty	Tulameen Encore	Heritage Himbo Top	Idea Winona

Figure 1: Blueberry, raspberry and strawberry varieties for an extended season.

Many of the berries in Figure 1 are familiar to growers, but the key is to have some of all varieties so that you can prolong the optimum harvest window. The area where many growers may be surprised at the varieties listed is in the fall raspberries. Most folks are still relying on Heritage to pull them through the autumn, but this is a mistake as the new varieties offer significant advances in earliness and fruit quality. The overall yield of these newer varieties will not approach Heritage, but having some nice looking early fall raspberries may encourage late summer pickers to return.

The chart also does not mention Day-Neutral strawberries. In New York, day neutral production relies largely on 4 varieties: Albion, Evie 2, Seascape and Tribute. Using these varieties in a number of different field or high tunnel production systems will add a great deal to berry season extension.

The blueberry variety plan is the most reliable in season stretching mainly because blueberries last so well on the plant. Still, in a year like summer 2010, the sustained heat really shortened the season, so most growers did not harvest much of anything past the 2nd week of August.

Blueberries ready to pick

Farmers in cold areas may get excited when they see the primocane blackberry varieties listed. Prime-Jim and Prime-Jan have been around for several years and offer the cold climate berry grower the possibility of getting blackberries in normally un-hospitable zones. The problem is that these varieties still need a VERY long growing season before they can be harvested. In a 2008 Massachusetts study, both of these varieties started bearing by Sept. 15 and were finished by early October in the field. Compared to the same planting design under a high tunnel, which yielded 2.5 times more fruit that same season, it still suggest that some type of protection would really help fall bearing blackberries.

Summer blackberries likewise may need some environmental or plant manipulation in many NY regions, but for growers in Zones 5 and warmer, these plants offer a product highly desired by health conscious consumers.

Ribes, currants and gooseberries, are very popular with certain ethnic markets, but growers would profit by putting a bit of extra effort into marketing these fruit. Currants and gooseberries are featured in many cooking magazines and make great preserves. Black currants specifically have very high anti-oxidant levels and could be marketed to those folks that have home juicers.

Fruiting Time	Summer Blackberry	Fall Blackberry	Red Currant	Black Currant	Gooseberry
Early Season	Ouachita	-----	Jonkheer von Tets* Pink Champagne	---	Invicta
Early mid-Season	Triple Crown	---	Minnesota 52 Stevens Red	Consort	Hinnomaki Green
Mid-Season	Doyle	Prime-Jim Prime-Jan	Rovada	Ben Alder Ben Sarek Titania	Hinnomaki Red
Late mid-Season	Chester	Prime-Ark 45	---	Ben Commond	Tixia
Late Season	---	---	Tatran	---	Captivator

Blackberry and ribes varieties for an extended season. *Susceptible to currant cane blight

The possibility for making the most of your berry season begins with your winter order. Take plenty of time to look at the fruit you offer over the entire season and try hard to avoid dead zones when no fruit is available. Northeast growers will have to work hard to meet the local demand, but the end result will be worth it.

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A mixed berry planting

Cornell Releases Two New Raspberry Varieties

Two new raspberry varieties produced by Cornell researchers, Double Gold and Crimson Night, offer small-scale growers and home gardeners showy, flavorful raspberries on vigorous, disease-resistant plants.

Double Gold produces a deeply blushed, golden champagne-colored fruit with a distinctive conical shape, earning the "double" in its name for its two harvests per season. The first year of planting, the initial crop is produced in the fall on the tips of that year's canes, and a second crop is produced farther down the same canes the following summer.

Crimson Night is more compact, making the dark purple canes a particularly attractive ornamental for container gardening or a backyard raspberry plot.

Small quantities will be available late this summer, and North American Plants expects to have enough plants to meet the anticipated demand of each variety by the spring of 2013. Plant patents will be filed later this year.

Interested growers can learn more about new Cornell berry varieties at open house events in July and September.